Chicago Show Issue

MOTOR AGE

Vol. LI
Number 4

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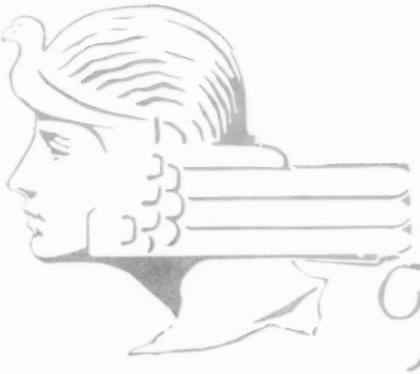

At the 1927
Automobile Shows

The Improved New

SAFETY STUTZ

is repeating its successes of 1926 as the dominating sensation of the shows

STILL years ahead of conventional design; now proved by millions of miles with thousands of enthusiastic owner-drivers; its features further developed and refined for 1927; proclaimed the world's safest automobile.

Weymann Flexible Bodies introduced, for the first time to America, on Stutz chassis.

Write or wire for the Stutz Dealers' Proposition

STUTZ

STUTZ MOTOR CAR COMPANY *of* AMERICA, Inc.
Indianapolis

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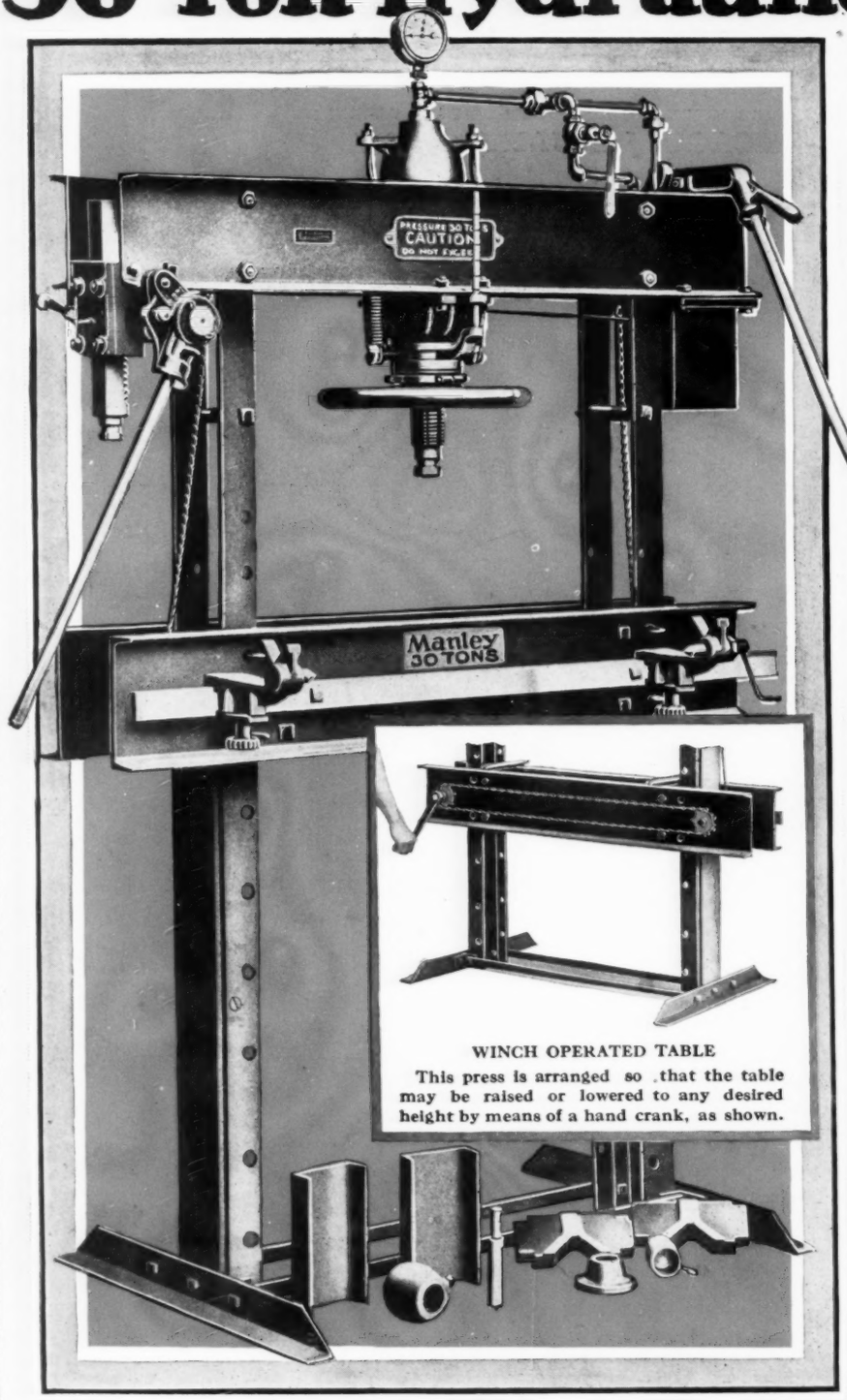
manley

30 Ton Hydraulic Press



WINCH OPERATED TABLE

This press is arranged so that the table may be raised or lowered to any desired height by means of a hand crank, as shown.

CAT. No. 9--Press Only $135.00

Rack and Pinion attachment.. $25.00

Test Centers . . . $15.00

Hydraulic Principle —much easier to operate and much faster.

Instantaneous Release —merely turn hand valve to release pressure.

Ball Bearing Hand Wheel —quickly spins nose down to work or away from work.

Open Side Construction —will handle pieces of any length.

Winch Operated Table —one man can easily adjust height of table in 15 seconds.

Independent Arbor Press —indispensable for starter and generator work and other work requiring sensitive rack and pinion press.

Test Centers Attached To Press —making them convenient for straightening work.

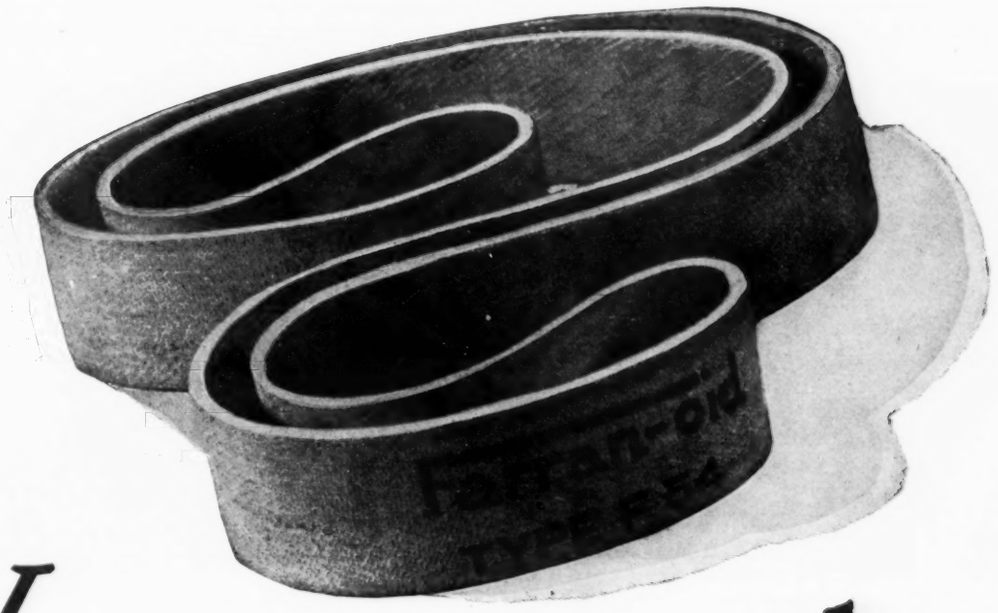
Complete Equipment —"V" blocks, channel blocks, noses and depth gauge, standard equipment.

We are prepared to supply other presses, both hydraulic and plain screw types, in a range of sizes to suit individual requirements.

Write for our complete catalog of automotive shop equipment which includes Jacks, Presses, Wrecking Cranes, Towing Trucks, Towing Poles, Tire Changers, Tire Inspectors, High Pressure Lubricators, Greasing Racks, Air and Water Stations, Engine Stands, Portable Work Benches, etc.

Manely Garage Equipment is sold only through Jobbers

MANLEY MFG. CO., YORK, PA.



You can't tear this fan belt in two!

It's a Farran-oid. It is made stronger than other fan belts.

Its specially woven tape body and selvedged edges make it impossible to tear. This body construction is tight at the edges, and loose in the center, allowing the belt to flex naturally over the pulleys, which are always slightly convex.

Hence there is no tendency to split through the center, as with belts woven with the same tension throughout.

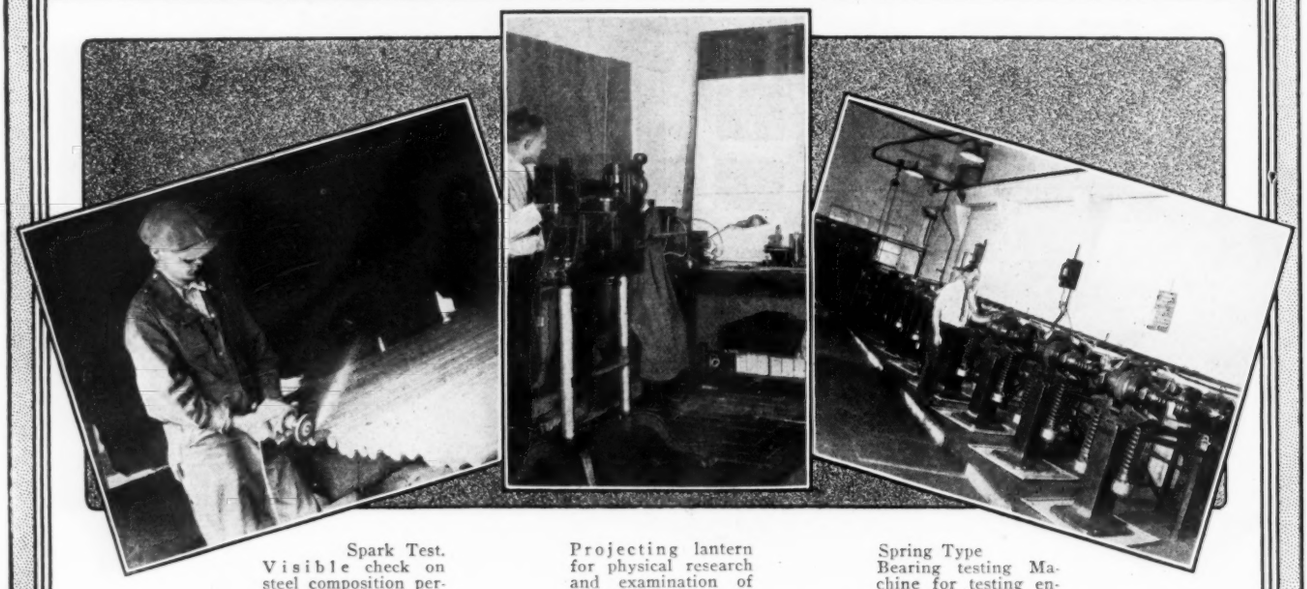
This is just ONE of many reasons why dealers like to sell Farran-oid Fan Belts. Their unusual efficiency and extra long life make many a friend for you. They are real trade builders.

Two types—equally high grade —Herringbone Flat Endless— Dualflex Molded Cable V-type.

THE FARRAN-OID COMPANY, AKRON, OHIO

Farran-oid *Products*

Fan Belts · Radiator Hose · Garage Air Hose · Car Washing Hose
Blowout Patches · Tube Patches · Ford Floor Mats



Spark Test. Visible check on steel composition performed by an expert.

Projecting lantern for physical research and examination of specimens.

Spring Type Bearing testing Machine for testing endurance under load.

THE enduring quality and precision of New Departure Ball Bearings is assured by the most exacting laboratorial checks and tests known to metallurgical science.

The production of New Departure ball bearings has doubled within the last five years. The endurance life of New Departure Ball Bearings has increased 600 per cent. in the same length of time.

Our staff of engineers is at your disposal for the solution of your bearing problems. A request puts you under no obligation.

New Departure Ball Bearings

Engineering data in the form of bulletins will be furnished you together with a convenient binder provided you can make advantageous use of them.

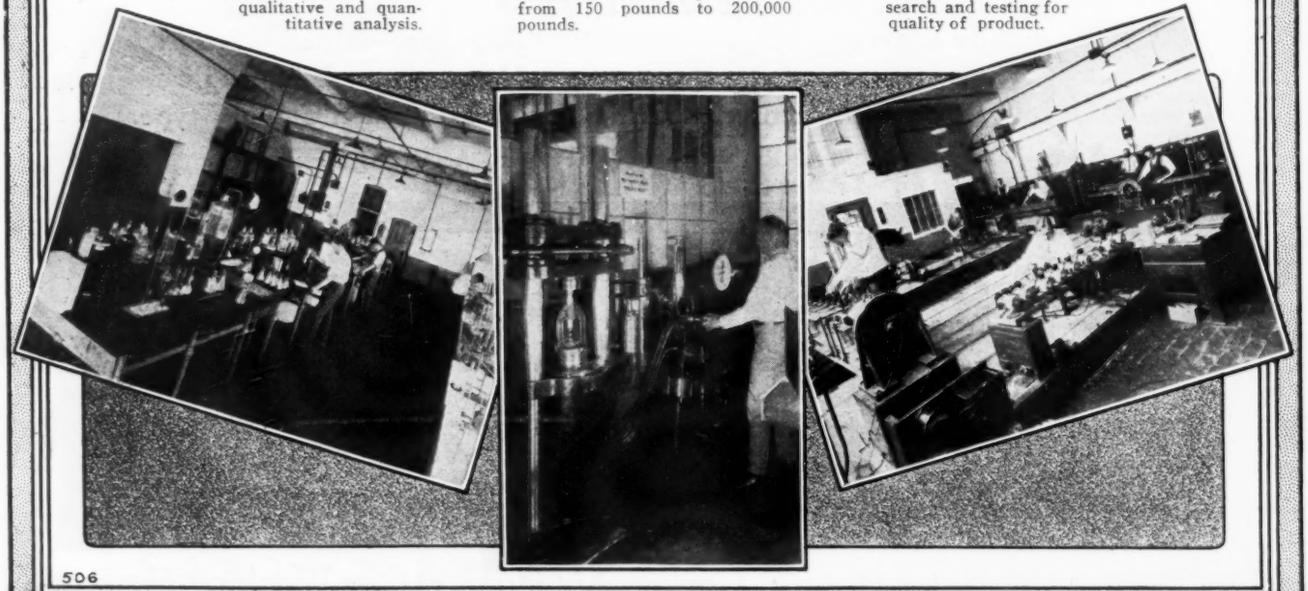
The New Departure Manufacturing Company

Chicago Bristol, Connecticut Detroit

Chemical Laboratory. Research for both qualitative and quantitative analysis.

Amsler Precision Compression Machine. Capable of measuring resistance to crushing forces of from 150 pounds to 200,000 pounds.

Physical Testing Laboratory. General research and testing for quality of product.



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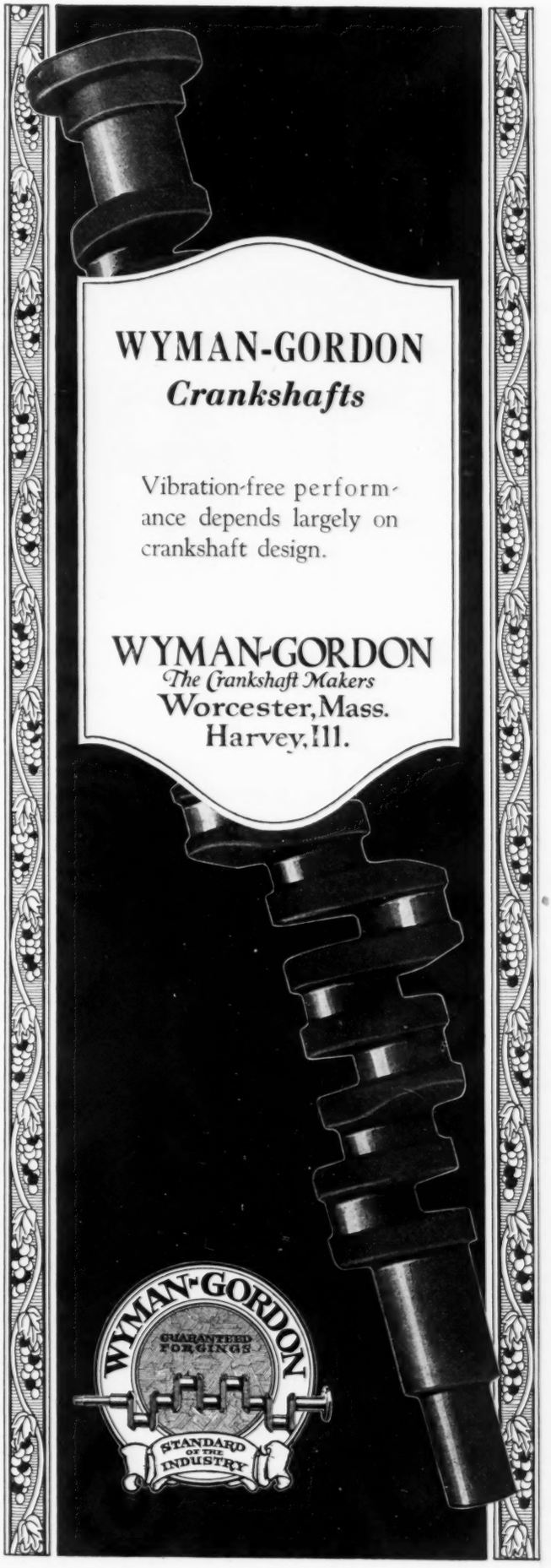
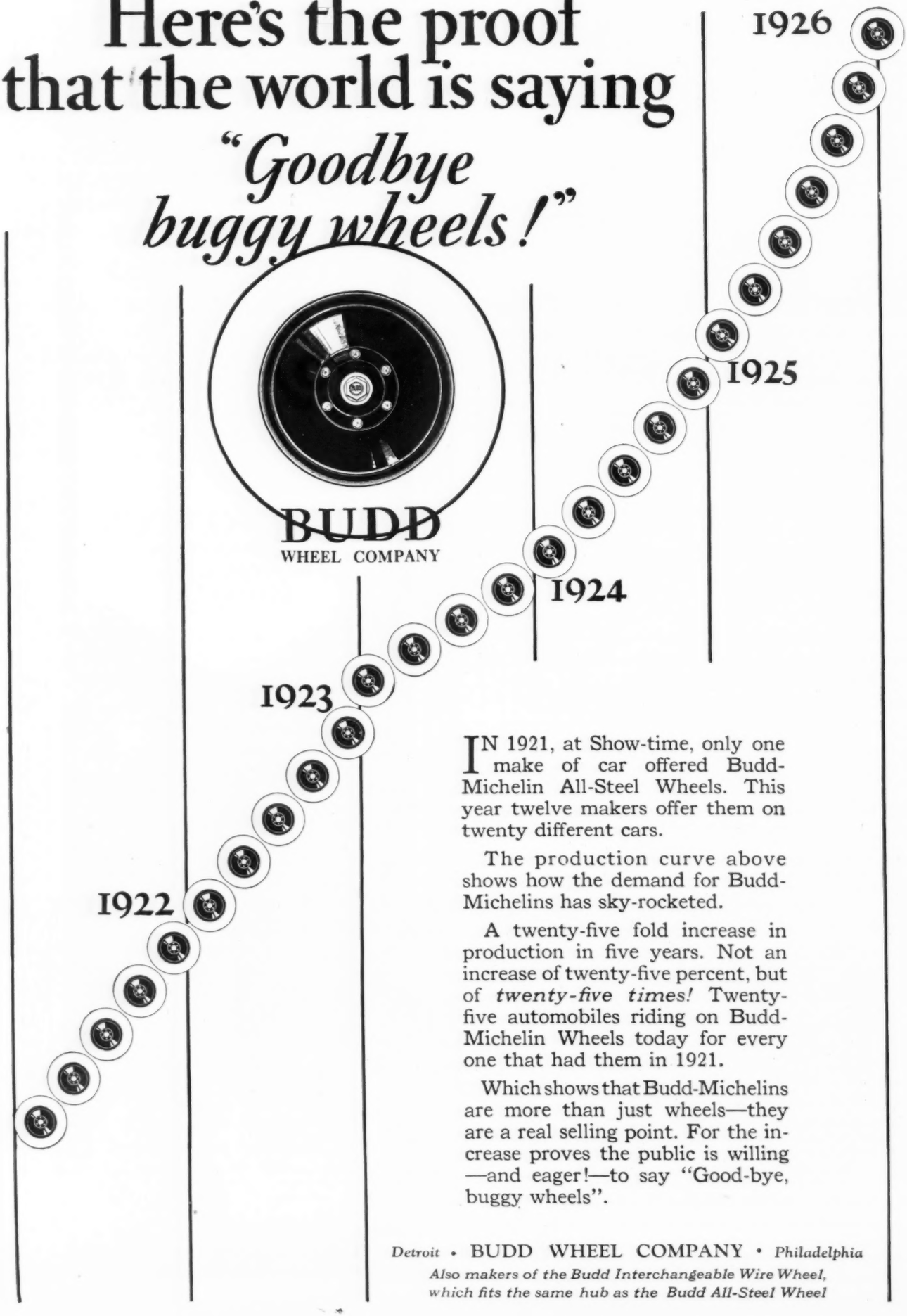


Here's the proof that the world is saying *"Goodbye buggy wheels!"*

BUDD
WHEEL COMPANY



IN 1921, at Show-time, only one make of car offered Budd-Michelin All-Steel Wheels. This year twelve makers offer them on twenty different cars.

The production curve above shows how the demand for Budd-Michelins has sky-rocketed.

A twenty-five fold increase in production in five years. Not an increase of twenty-five percent, but of *twenty-five times!* Twenty-five automobiles riding on Budd-Michelin Wheels today for every one that had them in 1921.

Which shows that Budd-Michelins are more than just wheels—they are a real selling point. For the increase proves the public is willing—and eager!—to say "Good-bye, buggy wheels".

Detroit • BUDD WHEEL COMPANY • *Philadelphia*

Also makers of the Budd Interchangeable Wire Wheel, which fits the same hub as the Budd All-Steel Wheel

ERSKINE SIX VOTED 'HIT' OF MOTOR SHOW
Within three hours after the doors of the twenty-seventh annual motor show were opened the Erskine six little aristocrat of automobiles, had duplicated its European successes and became the outstanding feature of the show, according to E. J. Murnane, Studebaker's New York retail salesmanager.
"All Saturday there were tremendous crowds around the Erskine Six booth," said Mr. Mur
NEW ERSKINE SIX BUILT ON SMART EUROPEAN LINES
Studebaker Celebrates 75th Anniversary With Latest Developments.
Studebaker celebrates its seventy-fifth anniversary with the American introduction of the Erskine Six, its
ERSKINE SIX LIGHT CAR OF FOREIGN TYPE
Studebaker Introduces Four Models with Engine of 146,1 Inches Displacement
Compact, Trim Erskine Sixes Welcomed Here
Studebaker Version of the Light Automobile Featured by Combination of Dignity and Comfort
Company Sees 75th Year
Launching of Latest Model Marks Anniversary of Founding of Corporation
ERSKINE SIX PROVES ITS WORTH
Twelve miles west of South Bend, Ind., a cut-off from the Lincoln Highway runs through a range of low tumbled hills that flank the broad valley of the St. Joseph River, once a route of trader, trapper and immigrant to the new West. Paralleling the road for a mile or more is a high wire fence enclosing 800 acres of rolling hill and meadow land.
NEW YORK SUN, SATU
CROWDS DRAWN TO AUTOMOBILE
HERALD TRIBUNE,
European Body Style Graceful In Erskine Six
Studebaker's New Product Now Built in Four Models With Smart Lines and Lacquer Coloring
Wide Sweeping Fender
Narrow Windshi
Allow H
ERSKINE'S FOUR MODELS TO COVER LIGHT CAR FIELD
The Erskine Six, Studebaker's new 2 1-3 litre car, has been developed in four models—custom sedan for five; tourer, for five passengers; custom coupe, with rumble seat, for four; and a business coupe, for two.
All the bodies for the new car were designed by R. H. Dietrich, Inc.
TRIED THIS CAR ON PARIS FIRST
Even South Bend Didn't Get Look at the Erskine.
T MADE HIT AT FRENCH SALON
This 2 1-3 Litres Concerns the Size of the Bore, Stroke, Etc.
FOUR NEW MODELS OF ERSKINE BUILT FOR STUDEBAKER
w 2 1-3 Liter Car Exceptionally Low Hung and of Compact Proportions
RT EUROPEAN LINE
MARK BIG
Studebaker Marks Anniversary With Erskine Six Debut
American Introduction of New Car, Celebrating Jubilee, Creates Sensation as in European Exhibit
This year is Studebaker's seventy-fifth anniversary, its diamond jubilee. The occasion is being celebrated according to Studebaker traditions, the introduction of a product two years ahead of its time—the new Erskine Six which is being shown for the first time. Studebaker has maintained its position for seventy-five years in the forefront of transportation by constantly keeping
Lauds Studebaker's New Erskine Six
Welcome Accorded the Light Car at Auto Show Pleases Murnane.
Within three hours after the doors of the 27th Annual Motor Show were opened, the Erskine Six, the little aristocrat of automobiles, had duplicated its European successes and become the feature of the
Erskine Six Offered by Studebaker
Originality of Design Seen in New European Type at Show.
All-Steel Dietrich Bodies
Studebaker celebrates its seventy-fifth anniversary with the American introduction of the Erskine Six, its new 2 1-3 litre car. Smartly European from the
New Erskine Six Is Now Two Years Old
Fifteen models were built and tested during the two years' experimental work and testing that preceded the introduction of the Erskine Six, Studebaker's new 2 1-3-litre car.
Studebaker's proving ground engineers, "the men who are never satisfied," conducted hundreds of tests before putting their stamp of approval on the car's design and performance.
Erskine Six Built on Historic Site
An interesting coincidence in connection with the Erskine "6," Studebaker's new 2 1-3 litre car, has been pointed out by Detroit automotive historians. A portion of the Detroit plant in which the new car is being manufactured includes the historic site where the first Model T Ford was built in 1908.
STUDEBAKER HAS NEW CAR
Erskine 6 Stands Out Conspicuously Because of All-Steel Construction
The Studebaker Corporation is showing a brand-new car—The Erskine six—in addition to its Studebaker line. The Erskine first made its appearance at the Paris Salon, in October, where it attracted wide attention, being in general appearance distinctly foreign in type, but embodying all of the American standards of comfort and performance. It has a 107-inch wheelbase and
FOUR ERSKINE CARS
Details of Models Introduced at the Show.
The Erskine Six, Studebaker's new 2 1-3 litre car, has been developed in four models—custom sedan for five passengers; custom coupe for four; rumble seat, for four; coupe, for two.
H. Dietrich. Both models are exceptional and in their combination and smart European
ERSKINE SIX MARKS SMALL CAR PROGRESS
Unique in Being First American Car to Come to Our Highways From Abroad
One of the most interesting chapters in the automotive history of the development of the Studebaker's
Erskine Six Well Equipped.
ENING WORLD, MONDAY, JANU
New Erskine Six Custom Sedan That Shows Smartness of Line
The Custom Sedan body of the Erskine Six, Studebaker's new 2 1-3 litre car, was designed by Dietrich and reflects the utmost in European smartness. It is of full vision steel construction, with unusually narrow windshield pillars.
Its customs design is reflected in tool and battery boxes set in the base of the wide crown fenders, the smart tilt of the rear tire, and the Dietrich's original treatment of moulding and belt line.
Beginning behind the radiator cap an embossed panel flares back over the hood, widening to merge with the beltrassing shade of lacquer finish. The Custom Sedan is amply proportioned for five passengers.
ERSKINE SIX POPULAR
Duplicating its successes at the London and Paris salons, the Erskine Six, Studebaker's new 2¾ litre car (this doesn't mean half pint size), has been the center of much attraction at the 1927 Automobile Show here.
From the opening of the Show until the close each day the Erskine is surrounded by a mass of interested spectators. They seem to like the style of it.

The Press Acclaims a New Favorite

As generous as was the press to the Erskine Six during the New York Show, cold type is totally unable to proclaim the warm welcome this little aristocrat received from the thousands who attended.

The Erskine stand was packed from opening time until the lights were shut off. Here was the car that had bested Europe on its own grounds—the car that was European in its outstanding originality of body lines, but wholly American in its innate advancement of design and luxury of appointment.

No wonder the automotive experts of the New York papers joined in a chorus of superlatives—no wonder the engineers of other manufacturers examined it from front to rear bumpers.

Selling from $945 to $995, the four Erskine body models, together with the Studebaker line ranging from $1160 to $2245, give Studebaker dealers a car to fit every purse and purpose. No wonder Studebaker is the most sought-after franchise in motordom today. There are a few—a very few points—still open. Write for particulars. Department 51, The Studebaker Corporation of America, South Bend, Indiana.

STUDEBAKER

NASH

Leads the World in Motor Car Value

First Showing
AT THE
Chicago Automobile Show
JANUARY 29th – FEBRUARY 5th

Special 4 Door Sedan
Advanced Six Chassis

Special 4 Door Sedan
Special Six Chassis

At the New York Automobile Show Nash disclosed two ultra new models, the *Ambassador* and the *Cavalier*, that definitely establish an entirely new enclosed body style.

In design they are of such arresting originality and unique artistry as to constitute the most important creative achievement in the history of American enclosed car craftsmanship.

And in preparation for an unprecedented public response and great demand Nash has now executed two additional cars in this new mode to be offered at prices of wider popular appeal.

These two enclosed cars—the *Special* 4-Door Sedan on the Advanced Six chassis and also on the Special Six chassis—will be given their first display at the Chicago Automobile Show, and simultaneously placed on exhibition in principal cities.

With their alluring grace and inimitable distinction, enhanced by the foreign technique displayed in the contours of the body, these *Special* 4-Door Sedan models emphatically confirm Nash's leadership of the industry in the fine art of body building.

And they are powered with the big Nash 7-bearing motor—*the world's smoothest type*—as are all other Nash models.

(4754)

Special
4 Door Sedan
ADVANCED SIX CHASSIS
As Executed by Nash

Special
4 Door Sedan
SPECIAL SIX CHASSIS
As Executed by Nash

LINCOLN DEALER LINKS

PUBLISHED MONTHLY
By ED C. GUTHARD, *Pres. and Gen. Mgr.*
LINCOLN PRODUCTS COMPANY
Manufacturers of
Lincoln Balloon Shock Absorbers
CHICAGO, ILL.

Vol. I FEBRUARY, 1927 No. 2

WEATHER
Longer days—
Work that pays;
Nothing ails
Bigger sales.

ED SAYS:
Lincolns take the BUMPS out of business—as well as roads.

Dealers Will Make More Money On Shock Absorbers In 1927

F. L. Baldwin, Proprietor of the F. L. Baldwin Tire & Service Station, Niagara Falls, N. Y. Read letter next column.

The Lincoln Is Strictly A BALLOON Shock Absorber for BALLOON Tires

Balloon Tires require fast action. Without exceptional speed on the part of the shock absorbers, the occupants of the car can not receive or enjoy complete shock absorber comfort. The Lincoln organization foresaw the popularity which Balloon Tires enjoy today and planned accordingly. As a result Lincoln dealers were ready to give the public what they needed and wanted, and this type of service has repaid them time and time again in extra sales and extra profits.

Illustrated Mailing Cards and Folders a Big Help

Mr. F. L. Baldwin of Niagara Falls, N. Y., sends a letter which every dealer will find of interest.

Gentlemen:

After investigating carefully the merits of different Shock Absorbers, and talking with the larger dealers in Buffalo, I came to the conclusion that you have the Snubbing device most practical from every standpoint.

Since first stocking up with "Lincolns," we have put on many sets. I always tell a man if he is not satisfied in every way, we will be glad to take them off and refund the full purchase price any time within 30 days. We have yet to receive our first request for a refund.

Two chief things I like about your product are that they are easy on belts and do not have to be cleaned and greased every year as many other Snubbing devices do.

Because of these reasons we just recently replaced several sets of competitive makes, all of whom are now thoroughly sold on "Lincolns."

I find your illustrated mailing cards and folders to be a big help, and, after sort of getting the feel of the Snubber business last year, believe that this year we can put out a real volume in this line.

(Signed) F. L. BALDWIN.

Exclusive oval shaped friction drum doubles life of shock absorber. Lightning quick action with only three working parts. Easy installation. Freedom from constant servicing or adjusting.

For ALL Cars $15 to $40

Auto Laundry Keeps Busy With Lincolns

Matt Petersen, Proprietor of the Auto Laundry, 4254 Fullerton Avenue, Chicago, has established a fine reputation and a good, profitable business as the shock absorber expert in his community. His force of seven men, who take care of the pumps, the greasing and washing, are paid a commission on the Lincolns they sell.

"Our personal cars are all Lincoln equipped," says Mr. Petersen, "which means continuous demonstrating, and nothing is better to pep up the sales. Our Lincoln business for 1927 will be three or four times as big as last year because our Lincoln customers will help us advertise the extra comfort Lincolns add to any car."

Auto Laundry, 4254 Fullerton Ave., Chicago. Matt Petersen, Proprietor.

Ed's Editorial

Help Yourself to Prosperity

Providence helps those who help themselves—but if we all help each *other* we can make Providence and prosperity mean one and the same thing.

* * *

Business is *good*, as I predicted. So good, in fact, that I want to be sure that everybody gets a big *share* of it.

* * *

You wouldn't believe there were so many clever ways to sell shock absorbers—'till you got a good look at my mail.

* * *

The ideas come pouring in here from all over the country. One fellow discovers a scheme to get his whole town talking "shocks"—and sells Lincolns.

* * *

Another has a new plan that makes his demonstrators hot to work *nights*—and sells more Lincolns.

* * *

Another man has a window idea that makes his corner look like 42nd and Broadway on a busy day—and still they come!

* * *

Seems a shame to waste all these good ideas; in fact, I'm doing all I can to pass them along, but I can't send them to *you* unless you drop me a line so I know where you are.

* * *

Dealers all over the country are writing me. We (you and I) can make this *team work* pull *your* shock absorber business out of the rut, and onto the highway of *sales*.

* * *

Link up with Lincoln—I *mean* it.

ED GUTHARD.

The Competitive Significance of Chrysler's Rise to 4th Place

27th—18th—then 9th—and now *4th place in volume in the industry!*

Such is the sensational three-year advance of Chrysler—on and upward to new heights of success.

Public preference for Chrysler products has thus been unmistakably expressed.

And, at the same time, are clearly evidenced the splendid sales achievements of the fine Chrysler dealer organization.

The public has endorsed Chrysler in the four great quality fields of the automobile market with its record breaking patronage—

First, because of Chrysler engineering and manufacturing genius.

Second, because of Chrysler performance, beauty, riding comfort, value and long life.

Third, because of the soundness of Chrysler Standardized Quality line of 36 body styles, priced from $750 to $3595, enabling Chrysler dealers to dominate the four great quality car markets.

The Chrysler successes of 1924, 1925 and 1926 are glorious history. They hold a tremendous significance for every car dealer who expects to make money this year and in the years to come.

For, as Chrysler has fought its way from 27th to 4th place—so will it continue inevitably to even greater accomplishments and Chrysler dealers will increase their profits in proportion.

Inquiries from responsible dealers will be kept in strict confidence. Immediate action is advisable if you would avail yourself of this outstanding opportunity.

CHRYSLER SALES CORPORATION, DETROIT, MICHIGAN
CHRYSLER CORPORATION OF CANADA, LIMITED, WINDSOR, ONT.

CHRYSLER

JAN29'27
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Volume LI MOTOR AGE Number 4

CHICAGO, JANUARY 27, 1927

The Route to Profits

N. A. D. A. Convention Will Visualize Outlook and Chart Course for the Dealer's Success in 1927

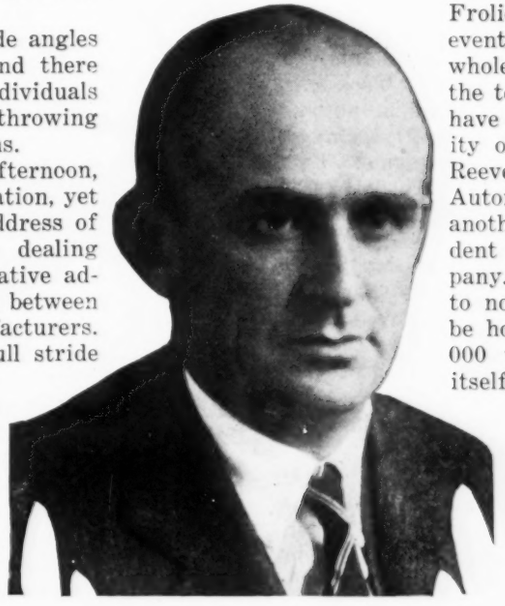
EXECUTIVES of the National Automobile Dealers' Association confidently expect the Jubilee Tenth Annual Convention of that organization to be one of the greatest gatherings of automobile dealers ever held. The convention is set for February 1, 2 and 3 at the La Salle Hotel in Chicago during the National Automobile Show period. C. A. Vane, general manager of the association, and those associated with him in the executive work, have labored long and hard to produce a program that will be of real profit to the delegates.

In a large way the program will compose a grand climax to the big merchandising campaign of 1926, while again it will sound the opening of still greater efforts during the present year. In the construction of this program its builders sought to reach as directly as possible problems that confront the automotive merchant at the present time and about which will hinge the matter of net profits to accrue at the end of December, 1927.

Expert opinion on various trade angles will be offered in abundance, and there will be ample opportunity for individuals to clarify questioned points by throwing them into the general discussions.

The first session, Tuesday afternoon, will be devoted mostly to organization, yet at this time there will be the address of President Charles B. Warren, dealing with the many phases of cooperative adjustment that have been handled between the N. A. D. A. and the manufacturers.

Merchandising will take its full stride beginning with the Wednesday morning session. The delegates first will hear a forecast and prediction of sales, profits and dealer conditions for 1927, and with a picture in mind of about what might be expected in a general way during the year they will be prepared for subjects that deal with profits through sales and salesmen, making profits by lowering used car losses and other angles of automobile merchandising.



C. B. Warren, president National Automobile Dealers' Association

Wednesday night will mark one of the most brilliant side features of the Chicago show season when the N. A. D. A. stages its Annual Trade Frolic and Banquet. High spots of this event will be "the man who makes the whole industry laugh," the honoring of the ten automobile business leaders who have served the association in the capacity of president, an address by Alfred Reeves, general manager of the National Automobile Chamber of Commerce, and another address by A. R. Glancy, president of the Oakland Motor Car Company. It is interesting in this connection to note that the ten past presidents to be honored sell something like $76,000,000 worth of cars annually, a figure itself suggesting tribute to the leadership in this organization.

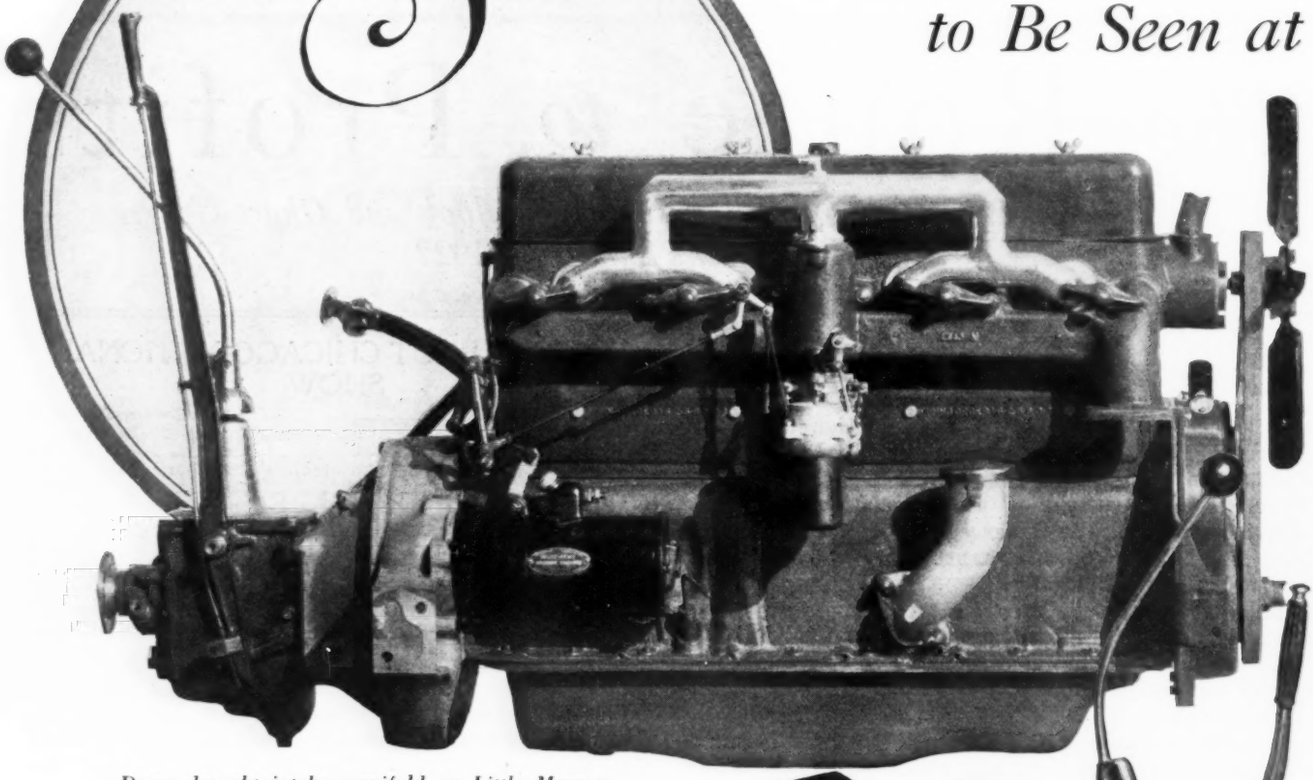
Apart from the convention, yet tied positively to its interests, will be the shop equipment and service discussion planned for Friday. In this meeting the N. A. D. A. will cooperate with the National Automobile Chamber of Commerce and the Motor and Accessory Manufacturers' Association.

FACTS ABOUT CHICAGO NATIONAL SHOW

Annual	Twenty-Seventh
Time	January 29-February 5
Place	Coliseum
Auspices	National Automobile Chamber of Commerce
Manager	Sam A. Miles
Number of Exhibitors:	
Cars (by name plates)	43
Trucks	9
Taxicabs	2
Shop Equipment (to press time)	49
Accessories (to press time)	106

The report of the twenty-seventh annual National Automobile Show at Chicago will be published in next week's Issue of MOTOR AGE. *Staff editors and writers are fresh from the New York Show, where many new models were introduced, and are prepared to give* MOTOR AGE *readers clear and authoritative articles on the news and developments of the industry that are of greatest interest to the retail trade.*

Some Mechanical to Be Seen at



Down draught intake manifold on Little Marmon

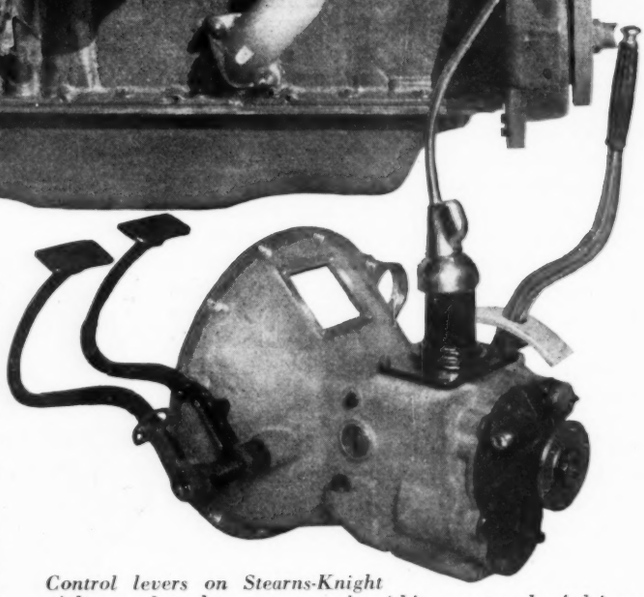
THE outstanding novel mechanical features that will be seen at the automobile shows this year and at the Coliseum in Chicago next week mark the states and stages of progress in automotive design, although from day to day and from month to month the cars seem just about the same. Even from one year to another the changes are not great, but if we look back two or three years the difference is striking.

Like the growth of a child unseen from day to day, the development of the automobile proceeds slowly but surely. We find a variation here, an improved device there, then after a lapse of a year or two we compare models and behold—there is a new car and an obsolete one.

The industry has gone ahead another stride in motor car development.

The factors in this transformation may be unseen by the casual observer, but the discerning visitor at the shows will note a point here or a change in construction there that marks the gradual evolution continuously going on. At the 1927 shows, probably the most strinking thing will be the number of models using eight-in-line engines, there being approximately twenty-two models equipped with this type. The demand for increased power, acceleration and smooth running at all speeds has rendered the eight cylinder engine eminently suitable for passenger car work and the disadvantage of great length has been overcome with cylinders of comparatively small bore.

With the coming of the eight cylinder engine we find compression ratios increasing, this being possible



Control levers on Stearns-Knight eight are shaped to put controls within easy reach of driver

with the reduction in cylinder volume and the use of light alloy pistons with their higher conductivity. Another condition which makes greater compression permissible is the fact that there are on the market a number of anti-knock fuels which are available in case trouble is experienced with detonation. Linked with the problem of compression and possible detonation, we find that the eight cylinder engine brings with it a problem in proper fuel distribution to the different cylinders. In this connection it is interesting to note departures from conventional design. One of these is the down draft manifolding system used on the eight cylinder Little Marmon.

Light alloy pistons previously referred to will be found on about 30 per cent of the models exhibited at the 1927 shows, and among the newer models the proportion is probably somewhat greater. Piston design which permits

Improvements
The Chicago Show

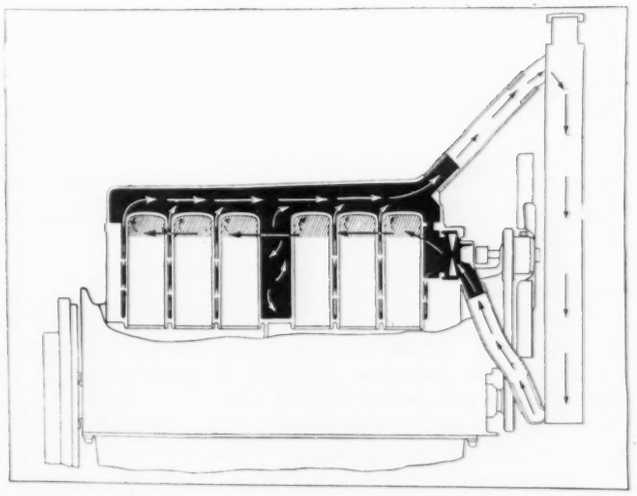
Constant Evolutionary Progress in Design Is Not Always Readily Visible to Casual Observer

the alloy piston to be fitted within close limits has eliminated the chief objection to this type of material, whereas light weight and conductivity are outstanding advantages.

The use of duralumin connecting rods is on the increase, there being 6.4 per cent of the models which will be shown that are fitted with this type of rod. Even where this material is not used we find connecting rods of lighter weight, alloy steel being another material used for this purpose.

Much of the improvement in design as compared with last year's models is in the way of more extensive engine equipment. Thermostats in the cooling system, although introduced some twelve years ago, are growing in favor. The thermostat functions either to control the water circulation or to operate a radiator shutter. Approximately 40 per cent of the cars which will be shown at the Chicago Automobile Show will have thermostats for one purpose or the other. Wills Ste. Claire and the new Paige have thermostat applications which the show visitor will find worth studying.

On duPont cars a novel flexible connection will be seen in the use of a copper bellows between the pump and cylinder jacket. Attention to cooling systems is not confined to thermostatic control, however, as is indicated by the Oldsmobile cylinder block design which takes the coolest water to the upper portions of the cylinder and uses Thermo-syphon cooling for the lower portions where less cooling action is necessary.

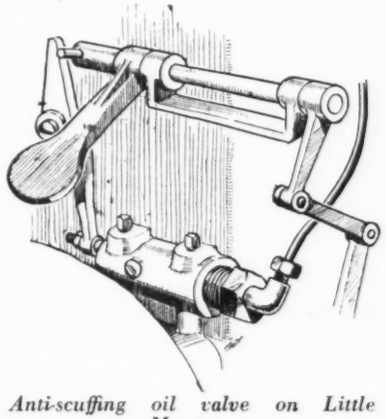


Two way pump and thermo syphon cooling in cylinder block of the Oldsmobile

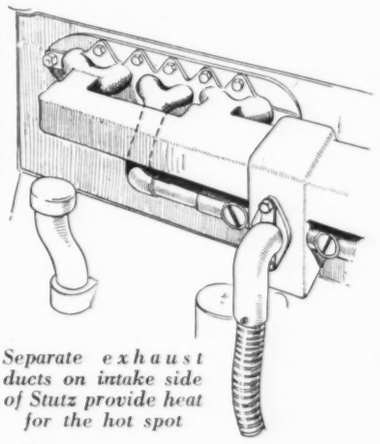
With the increased use of pressure lubrication systems the problem of lubricating piston and cylinder walls in cold weather has presented itself. When the engine is first started it takes an appreciable time before the oil begins to work through the crankshaft bearings and begins to be thrown on the cylinder walls. This is the cause of what has become known as scuffing of pistons. The Little Marmon eight previously described in MOTOR AGE incorporates a method of supplying oil to the pistons and cylinders every time the starting motor is operated so as to give lubrication at these points until the regular lubrication system begins to throw off oil from the bearings.

On all engines having inlet and

(*Continued on next page*)

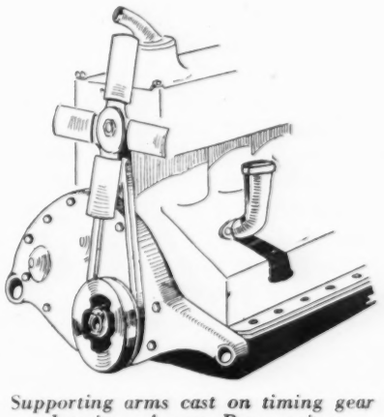


Anti-scuffing oil valve on Little Marmon

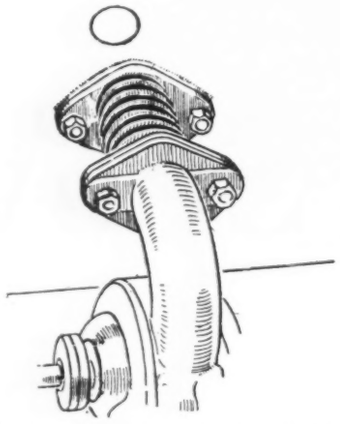


Separate exhaust ducts on intake side of Stutz provide heat for the hot spot

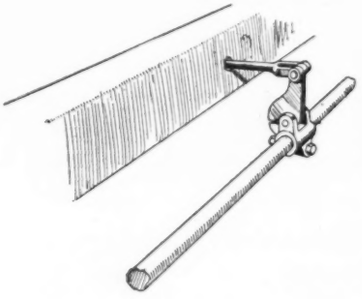
Flattened muffler tail pipe on Chevrolet



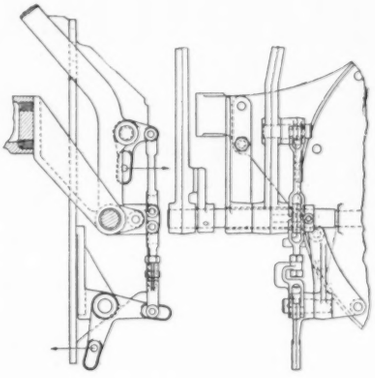
Supporting arms cast on timing gear housing of new Reo engine



Copper bellows connection between pump and cylinder jacket on du Pont



"One way" operating lever on cross shaft of Little Marmon



Pedal equalizer construction on Auburn

(Continued from preceding page)

exhaust ports on opposite sides, (sleeve valve and some valve in head types) a problem is presented by the necessity of carrying some of the exhaust gases to the exhaust jacket or hot spot on the inlet manifold. In some late designs of Knight engine the exhaust pipe is carried across the cylinder head at the center of the engine. On the Stutz engine, while the main exhaust ports are on the right hand side, there are auxiliary exhaust ports on the same side as the inlet ports, and a special manifold of smaller dimension carries some of the exhaust gases to the inlet manifold jacket, whence they are discharged through a flexible metallic tube connecting to a special muffler.

Crankcase ventilation is a practice that has gained many converts during the past year. It serves as a check on crankcase dilution and recovers some of the fuel lost by leakage past the piston. One simple method employed is to admit air for the carburetor to the valve chamber at one end through louvres and then conduct it from the other end to the carburetor through a pipe. The valve chamber is made to communicate to the crankcase and thus an air cleaning and ventilating system is effected.

Air cleaners are chiefly of the inertia type, but filters of different construction which take advantage of an oily surface to gather the dust are coming into use.

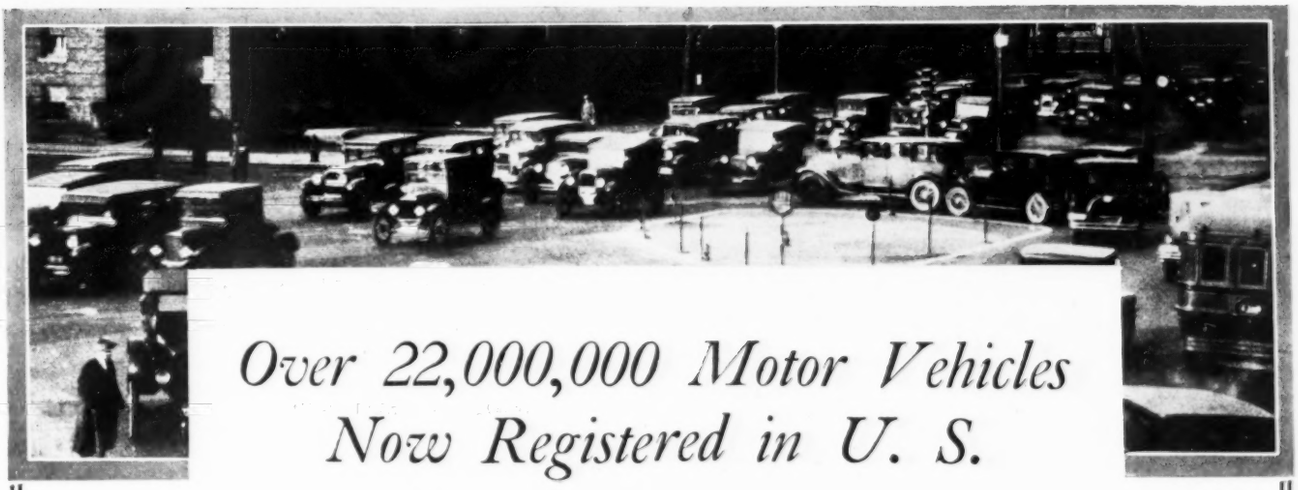
An unusual type of tail pipe is used on Chevrolet. This pipe is flattened first in one direction and then in the other to give what is known as a "kneeding" effect. It has long been customary to flatten the outlet to the tail pipe to steady the rate of discharge and the Chevrolet design apparently is intended to accomplish the same purpose.

In the matter of engine supports there seems to be no unanimity of opinion, although four point suspension seems to be more and more common. The object sought is evidently the stiffening of the frame and an increase of rigidity at the front end which will neutralize to some extent the tendency for the front wheels to shimmy and throw the front of the chassis into vibration. Pressed steel engine bearers inserted between the crankcase and the timing gear housing are used in some instances; in others, supporting arms are cast on the crankcase at the forward end, while in the new Reo "Flying Cloud" the supporting arms are cast on the timing gear housing which forms a separate casting bolted to the crankcase.

With the general change from multiple disk to single plate clutches and the reduction in size of the transmission we find that the distance from the rear of the cylinder block to the center of the transmission cover plate which generally marks the location of the gear shift and emergency brake lever has been materially reduced. This has resulted in moving the lever mounting farther forward in the front compartment of the car and has sometimes necessitated specially shaped levers to put the controls within easy reach of the driver. One of the illustrations shows the gear shift and emergency brake lever construction as used on the new Stearns Knight eight cylinder car.

Since the introduction of four wheel brakes there has been much discussion as to the merits and demerits of brake equalizers. Merely equalizing the force of application does not necessarily mean that the retarding force at the brake drums is equalized. However, equalizers are used on many representative cars. On Auburn and Gardner, unique construction at the pedal permits proportioning the braking effort between the front and rear brakes in a pre-determined ratio. On the Auburn car a system of bell cranks is used so that the pedal motion will be transmitted to the forward and rear brake connections and at the same time these two connections will re-act on each other. The construction is also made so that should one set of brakes become inoperative for any reason the action of the equalizing device, being limited, will still enable the other set of brakes to stop the car. The Auburn construction is here illustrated and the Gardner construction was shown in a previous issue of MOTOR AGE.

On many cars the emergency brake uses two of the four service brakes, from a practical standpoint this means that the emergency brake is primarily a parking brake. On Lincoln the emergency actuates separate shoes and is accordingly independent of the service brakes. A construction similar to that used in the blade of a pocket knife is seen on cars which operate the same brake with either the pedal or the brake lever. If the cross shaft is turned by operation of the brake pedal, the lever connected to the emergency brake lever will merely fold up. On the other hand if the emergency brake lever is operated this lever arm will become rigid and operate the cross shaft of the braking-system. One of the illustrations shows this feature.



Over 22,000,000 Motor Vehicles Now Registered in U. S.

(Summary as of Jan. 1, 1927. Compiled by *Automotive Industries*)

	Total	Passenger Cars	Trucks		Total	Passenger Cars	Trucks
Alabama	225,681	197,671	28,010	Nevada	24,014	19,300	4,714
Arizona	73,574	63,500	10,074	New Hampshire	89,001	78,400	10,601
Arkansas	209,419	179,480	29,939	New Jersey	651,729	520,423	131,306
California	1,600,171	1,383,878	216,293	New Mexico	54,341	52,111	2,230
Colorado	252,787	232,350	20,437	New York	1,816,434	1,461,629	354,805
Connecticut	280,800	238,700	42,100	North Carolina	385,763	352,217	33,546
Delaware	44,418	36,246	8,172	North Dakota	157,822	145,571	12,251
District of Col.	129,792	115,633	14,159	Ohio	1,510,000	1,325,000	185,000
Florida	416,930	346,492	70,438	Oklahoma	510,000	460,000	50,000
Georgia	278,051	242,358	35,693	Oregon	234,125	215,824	18,301
Idaho	95,500	86,500	9,000	Pennsylvania	1,438,303	1,250,356	187,947
Illinois	1,375,206	1,199,717	175,489	Rhode Island	109,145	89,832	19,313
Indiana	772,910	664,887	108,023	South Carolina	180,967	163,368	17,599
Iowa	689,036	639,457	49,579	South Dakota	168,230	153,840	14,390
Kansas	491,276	441,373	49,903	Tennessee	276,097	251,104	24,993
Kentucky	278,337	249,412	28,925	Texas	1,047,202	938,732	108,470
Louisiana	238,000	202,100	35,900	Utah	81,633	69,133	12,500
Maine	143,616	121,333	22,283	Vermont	73,863	68,231	5,632
Maryland	249,056	236,680	12,376	Virginia	321,879	271,000	50,879
Massachusetts	701,224	609,539	91,685	Washington	361,775	308,237	53,538
Michigan	1,119,973	970,880	149,093	West Virginia	221,001	194,620	26,381
Minnesota	624,478	552,944	71,534	Wisconsin	662,282	581,441	80,841
Mississippi	210,500	189,000	21,500	Wyoming	49,633	44,108	5,525
Missouri	651,350	586,134	65,216				
Montana	103,946	88,828	15,118				
Nebraska	361,945	333,874	28,071	Total	22,043,215	19,223,443	2,819,772

License Tag No. 2,000,000 Due This Year

Gain in Registrations Keeps Pace with Other Years

THE foregoing table compiled for the Chilton Class Journal Co., by Automotive Industries, shows the substantial gain in motor vehicle registration in the United States in the year 1926.

Cars and trucks registered at the beginning of 1927 numbered 22,043,215 as compared with 19,843,936 at the beginning of 1926. The gain was 2,199,239, or slightly more than 11 per cent. For 1926 the increases of registrations over 1925 was about 12 per cent. Thus it is seen that the increase in the total number of vehicles in operation continues at a substantial rate regardless of predictions of saturation.

An interesting observation based on these figures is the indication that New York will be the first state to register 2,000,000 automobiles and that the license plate bearing this number will be issued in the course of the present year.

These figures show that New York is still the leading state in the number of motor vehicles registered, with a total of 1,816,434. The next four in order are, California, 1,600,171; Ohio, 1,510,000; Pennsylvania, 1,438,303; Illinois, 1,375,206.

Out of the total registration of 22,043,215 vehicles, passenger cars account for 19,223,443 and trucks for 2,819,772.

List *of* Exhibitors *at* 1927

Passenger Cars

Auburn Automobile Co., Auburn, Ind.
Buick Motor Co., Flint, Mich.
Cadillac Motor Car Co., Detroit, Mich.
Chandler-Cleveland Motors Co., Cleveland, Ohio.
Chevrolet Motor Co., Detroit, Mich.
Chrysler Sales Corp., Detroit, Mich.
Geo. W. Davis Motor Car Co., Richmond, Ind.
Dodge Brothers, Inc., Detroit, Mich.
Durant Motors, Inc. (Star), New York City.
Elcar Motor Co., Elkhart, Ind.
Essex Motors, Detroit, Mich.
Flint Motor Co., New York City.
Ford Motor Co. (Lincoln), Detroit, Mich.
H. H. Franklin Mfg. Co., Syracuse, N. Y.
Gardner Motor Co., Inc., St. Louis, Mo.
Hudson Motor Car Co., Detroit, Mich.
Hupp Motor Car Corp., Detroit, Mich.
Jordon Motor Car Co., Inc., Cleveland, Ohio.
Kissel Motor Car Co., Hartford, Wis.
Locomobile Co. of America, Bridgeport, Conn.
McFarlan Motor Corp., Connersville, Ind.
Marmon Motor Car Co., Indianapolis, Ind.
Moon Motor Car Co., St. Louis, Mo.
Nash Motors Co., Kenosha, Wis.
Oakland Motor Car Co., Pontiac, Mich.
Olds Motor Works, Lansing, Mich.
Packard Motor Car Co., Detroit, Mich.
Paige-Detroit Motor Car Co., Detroit, Mich.
Peerless Motor Car Co., Cleveland, Ohio.
Pierce-Arrow Motor Car Co., Buffalo, N. Y.
Reo Motor Car Co., Lansing, Mich.
Rickenbacker Motor Co., Detroit, Mich.
Roamer Motor Car Co., Kalamazoo, Mich.
F. B. Sterns Co., Cleveland, Ohio.
Studebaker Corp. of America, South Bend, Ind.
Stutz Motor Car Co. of America, Indianapolis, Ind.
Velie Motors Corp., Moline, Ill.
Wills Sainte Claire, Inc., Marysville, Mich.
Willys-Overland, Inc., Toledo, Ohio.

Accessory Exhibitors

A-C Spark Plug Co., Flint, Mich.
Adams & Westlake Co., Chicago, Ill.
American Chain Co., Inc., Bridgeport, Conn.
Anti-Stall, Inc., New York City.
Atlantic Yellowstone Pac. Hiway, Inc., Sioux Falls, S. D.
Automobile Digest, Cincinnati, Ohio.
Automobile Equipment Mfg. Co., Chicago, Ill.
Automotive Daily News, New York City.
Auto-Con-Den-So Meter Co., Chicago, Ill.
Badger Mfg. Co., Milwaukee, Wis.
Bendix Corp., Chicago, Ill.
Beneke Mfg. Co., Chicago, Ill.
Biflex Products Co., Waukegan, Ill.
Borg & Beck Co., Chicago, Ill.
Bossert Corp., Utica, N. Y.
Budd Wheel Corp., Philadelphia, Pa.
Bunting Brass & Bronze Co., Toledo, Ohio.
Byrne, Kingston & Co., Kokomo, Ind.
Connecticut Automotive Specialty Co., Railroad & Hancock Ave., Bridgeport, Conn.
C. G. Spring & Bumper Co., Detroit, Mich.
Geo. R. Carter Co., Connersville, Ind.
Chilton Class Journal Co., Philadelphia, Pa.
Continental Motors Corp., Detroit, Mich.
Cox Products Co., Cleveland, Ohio.
Dayton Steel Foundry Co., Dayton, Ohio.
Dole Valve Co., Chicago, Ill.
Duraseal Corp., Cleveland, Ohio.
Eagle-Ottawa Leather Co., Grand Haven, Mich.
Enterprise Products Co., 4554 Broadway, Chicago, Ill.
Federal Pressed Steel Co., Milwaukee, Wis.
Fer-Mas Co., Newark, N. J.
Fitzgerald Mfg. Co., Torrington, Conn.
Flower City Specialty Co., 250 Mill St., Rochester, N. Y.
Folberth, Inc., 7914 Lake Ave., Cleveland, Ohio.
Irving Florman Co., New York City, N. Y.
Gabriel Snubber Mfg. Co., Cleveland, Ohio.
Gemmer Mfg. Co., Detroit, Mich.
General Chromium Corp., 14-140 General Motors Bldg., Detroit, Mich.
General Electric Co., Schenectady, N. Y.
Gits Bros. Mfg. Co., Chicago, Ill.
L. P. Halladay Co., Waukegan, Ill.
Hamilton Wade Co., Brockton, Mass.
Edward F. Hartford, Inc., Jersey City, N. J.
Harvey Spring & Forging Co., Racine, Wis.
Hassler Mfg. Co., 1535 Naomi St., Indianapolis, Ind.
Henderson Bros., Chicago, Ill.
Hercules Motors Co., Halliwell Place S. E., Canton, Ohio.
Houde Engineering Co., Buffalo, N. Y.
Hub Sales Co., Inc., 995 Market St., San Francisco, Cal.
Illinois Iron & Bolt Co., Carpentersville, Ill.
Imperial Brass Mfg. Co., Chicago, Ill.
Irving Engineering Co., Buffalo, N. Y.
Kokomo Electric Co., Kokomo, Ind.
Lorraine Corp., Chicago, Ill.
Lovejoy Mfg. Co., Boston, Mass.
Metal Stamping Co., Long Island City, N. Y.
Metropolitan Body Co., Bridgeport, Conn.
Midwest Steel and Supply Co., Bradford, Pa.
Mot-Acs, Inc., 42 Broadway, New York, N. Y.
Mota-Meter Co., Inc., Long Island City, N. Y.
Motor, New York City.
Motor Improvements, Inc., Newark, N. J.
Naclite Distributor of Illinois, Claridge Hotel, New York City.
National Used Car Market Report, Inc., Chicago, Ill.
O. K. Vacuum Brush Co., 115 S. Dearborn St., Chicago, Ill.
Overhead Door Corp., Hartford City, Ind.
Owen-Dyneto Corp., Syracuse, N. Y.

Chicago Automobile Show

Perfection Heater & Mfg. Co., Cleveland, Ohio.
Pines Winterfront Co., Chicago, Ill.
Pyrene Mfg. Co., Newark, N. J.
Rectifier Mfg. Co., Chicago, Ill.
Red Wing Spring Co., 612 N. Michigan Ave., Chicago, Ill.
Rex Mfg. Co., Connersville, Ind.
Robinson Aro-Auto-Signal Co., 1333 Broadway, New York, N. Y.
Ross Gear & Tool Co., LaFayette, Ind.
A. Schrader's Son, Inc., Brooklyn, N. Y.
Safe-T-Stat Co., 79 Bridge St., Brooklyn, N. Y.
Sheldon Axle & Spring Co., Wilkes Barre, Pa.
Shere Metal Products Corp., 549 W. Washington St., Chicago, Ill.
Sieg-Warford Co., Chicago, Ill.
Simplex Automotive Distributors, Inc., 2241 S. Michigan Ave., Chicago, Ill.
Simplex Piston Ring Sales Co., Chicago, Ill.
Steelcote Mfg. Co., Theresa & Gratiot, St. Louis, Mo.
Stephenson Protectahood, Auburn, N. Y.
Stover Signal Engineering Co., Racine, Wis.
Super Smart Studios, Inc., Chicago, Ill.
Tonneau Shield Co., Inc., New York City.
Trico Products Corp., Buffalo, N. Y.
Tripp Secord & Co., Detroit, Mich.
United States Chain & Forging Co., Pittsburgh, Pa.
U. S. Air Compressor Co., 5300 Harvard Ave., Cleveland, Ohio.
Unity Mfg. Co., Chicago, Ill.
Universal Service Co., 46 Halsey St., Brooklyn, N. Y.
Vacuum Oil Co., New York City.
Van Auken, Co., Pontiac, Mich.
John Warren Watson Co., Philadelphia, Pa.
Watts Morehouse Co., Jackson. Mich.
Waukesha Motor Co., Waukesha, Wis.
Wedler Shuford Co., 1116 S. Grand Blvd., St. Louis, Mo.
Wellston Mfg. Co., Wellston, Ohio.
Western Gear Co., Detroit, Mich.
Westinghouse Elec. & Mfg. Co., East Pittsburgh, Pa.
Wire Wheel Corp. of America, Buffalo, N. Y.
Wolverine Bumper & Specialty Co., Grand Rapids, Mich.

Taxicabs

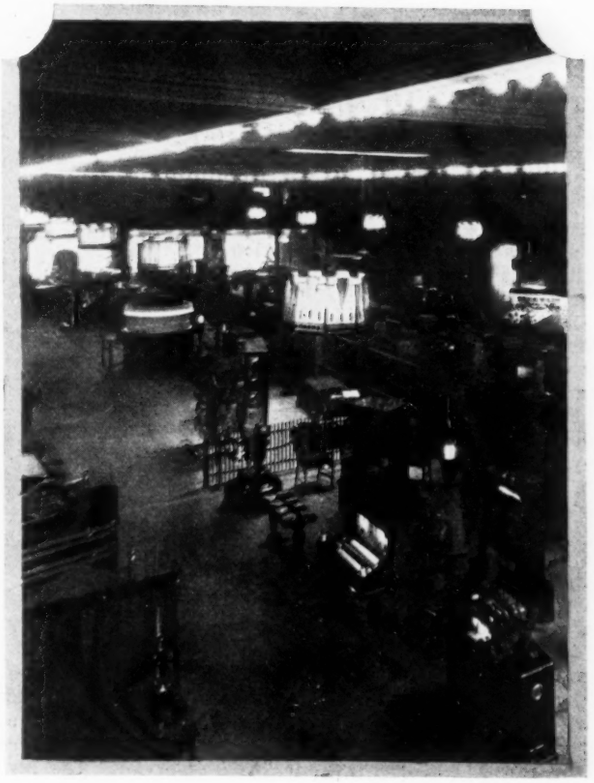
Dodge Brothers, Inc., Detroit, Mich.
Yellow Mfg. Sales Corp., Chicago, Ill.

Trucks

Chevrolet Motor Co., Detroit, Mich.
James Cunningham Son & Co., Rochester, N. Y.
Dodge Brothers, Inc., Detroit, Mich.
Durant Motors, Inc. (Star), 1819 Broadway, New York City.
Federal Motor Truck Co., Detroit, Mich.
General Motors Truck Co. (Yellow Knight), Chicago, Ill.
Graham Brothers, Detroit, Mich.
Oakland Motor Car Co., Pontiac, Mich.
Stewart Motor Corp., Buffalo, N. Y.

Shop Equipment Exhibitors

Albertson & Co., Inc., Sioux City, Iowa.
Asch & Co., New York City.
Au-To Compressor Co., Wilmington, Ohio.
Automotive Maintenance Mach. Co., Chicago, Ill.
Bean Spray Pump Co., Lansing, Mich.
Black & Decker Mfg. Co., Baltimore, Md.
Brunner Mfg. Co., Utica, N. Y.
Carborundum Co., Niagara Falls, N. Y.
Champion Pneumatic Machinery Co., Chicago, Ill.
Curtis Pneumatic Machinery Co., St. Louis, Mo.



Frank Danielson Mfg. Co., 2344 W. Austin Ave., Chicago, Ill.
Eager Electric Co., Watertown, N. Y.
Fleming Machine Co., Worcester, Mass.
General Equipment Corp., Kalamazoo, Mich.
Halstead Specialties, 1819 Broadway, New York City.
Hardie Mfg. Co., Hudson, Mich.
Hayes Pump & Planter Co., Galva, Ill.
Hinckley-Myers Co., Jackson, Mich.
Hobart Brothers, Troy, Ohio.
Hutto Engineering Co., Detroit, Mich.
Imperial Brass Mfg. Co., Chicago, Ill.
Kehawke Mfg. Co., Minneapolis, Minn.
Kellogg Mfg. Co., Rochester, N. Y.
Kent-Moore Organization, Detroit, Mich.
Lipman Pump Works (Division of Cotta Transmission Corp.), 2320 11th St., Rockford, Ill.
Lisle Mfg. Co., Clarinda, Iowa.
Manley Mfg. Co., York, Pa.
Marshall Electric Co., St. Louis, Mo.
Milwaukee Tool & Forge Co., South Milwaukee, Wis.
Motor Service, Chicago, Ill.
Pacific Rim Tool Co., Cleveland, Ohio.
Roth Bros. & Co., Chicago, Ill.
Safety Vulcanizer Co., Chicago, Ill.
Shoemaker Automotive Equip. Co., Freeport, Ill.
Simplicity Mfg. Co., Port Washington, Wis.
Snap-On-Wrench Co., Chicago, Ill.
South Bend Lathe Works, South Bend, Ind.
Speednut Wrench Corp., 190 N. State St., Chicago, Ill.
Stevens-Walden-Worcester, Inc., Worcester, Mass.
Scully Steel & Iron Co., P. O. Box 814, Chicago, Ill.
Van Dorn Electric Tool Co., Cleveland, Ohio.
Van Norman Machine Tool Co., Cleveland, Ohio.
Wadell Engineering Co., 350 Mulberry St., Newark, N. J.
Walker Mfg. Co., Racine, Wis.
Weaver Mfg. Co., Springfield, Ill.
Joseph Weidenhoff, Chicago, Ill.
J. H. Williams & Co., Buffalo, N. Y.
Yellow-Jack-It Mfg. Co., Chicago, Ill.

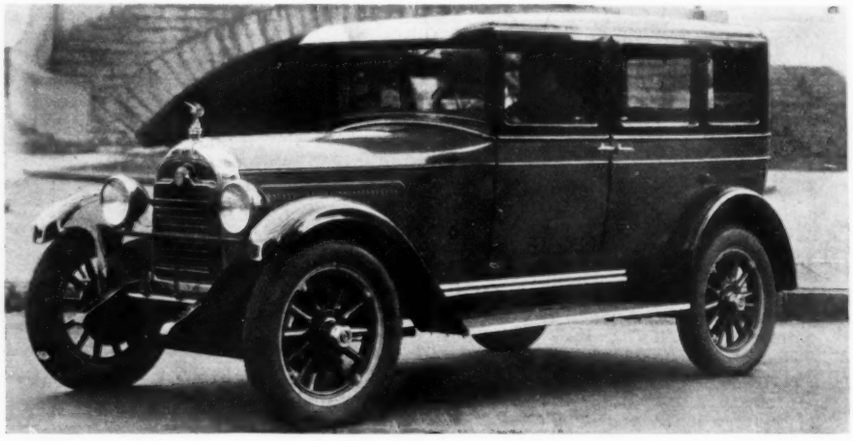
Falcon-Knight Will Be Seen in Chicago Next Week

New Automobile Which Will Make Its Public Appearance in March Will Be Displayed to the Trade During Show Week

A NEW car that will be seen in Chicago during the automobile show next week, although it will not be exhibited in the show, is the Falcon-Knight, a technical description of which appeared in the Jan. 13 issue of MOTOR AGE.

As has been told, this car will be manufactured at Elyria, Ohio, by the newly organized Falcon-Knight Corporation. It will be equipped with a Knight sleeve valve engine with six cylinders and seven-bearing crankshaft. The cylinder dimensions are $2\frac{13}{16}$ in. by $3\frac{7}{8}$ in. The engine has an N. A. C. C. rating of 20.7 hp., and is said to deliver 46 b.hp. at 3000 r.p.m.

The wheelbase is 109½ in., and the tires are 30x5 in. The car is to sell in the $1000 price class and is scheduled to appear in dealers' show rooms some time in March. The Falcon-Knight Corporation will have headquarters at the Congress Hotel in Chicago during the show.



The Falcon-Knight sedan

Farmer Lubrication System

A CHASSIS lubrication system which delivers heavy oil in measured quantities has been developed by A. J. Farmer and is being produced at the plant of the Farmer Lubricating Systems, Inc., Detroit, Mich. The system includes a valve of unique design, which in addition to measuring the required amount of oil for each bearing provides a positive shut-off to eliminate waste of lubricant. Oil of the consistency of 600-W can be used and the compressor supplies a pressure of 1,000 lbs. For automotive use a plunger type of compressor is employed and the design can be so arranged that the plunger is operated either by hand or foot. A feature of the system is that points above the chassis level, like water pump, ignition distributer and fan are oiled simultaneously with the lubrication of the chassis.

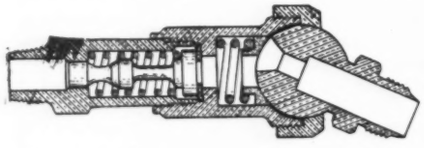


Fig. 2. Where movement occurs this ball joint connection is used. The spring and spring washer keep ball tight and prevent leakage

As pressure is applied to the plunger the oil in the compression barrel is forced into the feed line outlet. A ball check valve of special design immediately below the reservoir allows the oil to run into the compression barrel when the plunger is in normal position, but when pressure is applied the ball prevents the return of the oil to the reservoir. The layout of the piping is similar to that of other reservoir systems, the oil for the lower spring shackle bolts being delivered through drilled passages in the side shackles with special ball joint fittings making connection wherever movement occurs. As will be seen in Fig. 2, the spring and spring washer keep the ball against the seat and nut. The measuring and shut-off for the oil supply to each bearing point is accomplished by a valve shown in Fig. 3. Regulation of the amount of oil required by the respective bearings is determined by the length of the piston travel. The valve bodies are the same size as are pistons and the amount of oil delivered is dependent upon the distance of the valve closing face of the piston from the piston head. Thus, to vary, the amount of oil it is necessary only to substitute a piston having a different position of the valve closing face.

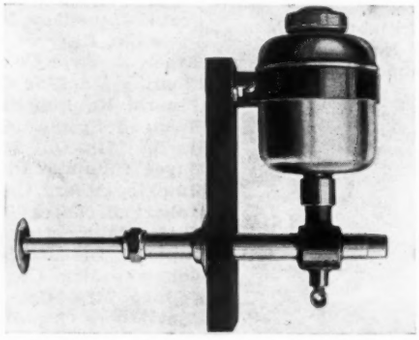


Fig. 1. Central reservoir of the Farmer lubrication system showing piston valve operated by hand or foot

In the upper valve shown in Fig. 3, the piston is back against the copper gasket, shutting off the main supply line with the system inoperative. As pressure is applied in the compression chamber, the oil forces the piston forward and the oil by-passes into the measuring chamber of the valve. When the pressure in the valve equals that in the line, the piston again moves forward forcing the measured quantity of oil into the bearing. When the piston has traveled to the end of its limit as determined by the valve closing face in the center of the piston coming in contact with the valve seat of the valve body, the bearing is shut off from any further supply of oil irrespective of the amount of pressure exerted in the line. The lower view of Fig. 3 shows the piston valve closed against the seat. As pressure on the reservoir plunger is released, the spring forces the piston back to the position shown in the upper picture and the system is ready for the next application of lubricant. This operation takes place simultaneously at every bearing point in the line when the pressure is applied no matter how much or how little lubrican is required by the bearings.

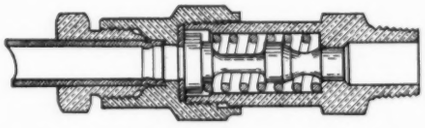


Fig. 3. Detailed construction of valve which measures and shuts off the oil at each bearing point

New Hutto Cylinder Grinder

WITH the addition of a portable unit type of grinder, the Hutto Engineering Company of Detroit now is in position to provide grinder equipment for every class of cylinder grinding. Worn blocks can be reground while mounted in the chassis or when stripped and dismounted. Cylinders can be finished to close limits from the rough boring or reaming and when worn tapered or out of round.

This machine uses the characteristic Hutto grinder head which incorporates an opposed conical adjustment insuring positive sizing. Six long abrasive stones are mounted in individual steel frames which are mounted in a substantial hardened steel head. These stones are controlled by a graduated micrometric dial. Grinding begins with the stones set at an undersize dimension and the diameter is increased to the desired size at a set stop by means of a hand brake control. The grinder head is driven and floated by intermediate connection which allows the grinding axis to follow that already established by the cylinder.

Four vertical bar supports which are equipped with feet suitable for bolting on the cylinder or a table, carry an oil tight aluminum housing. All of the mechanism for controlling the stroke of the grinder is enclosed within this housing which is packed with grease. Rotation is supplied by an electric motor which is bolted to the top of the housing. Collet type nuts which engage with the supporting bars lock the housing at the corret height.

New Hutto grinder which can refinish cylinder blocks either on or off the cars

Operation is controlled by a hand lever located immediately below the housing and a brake for stopping is supplied. The size at the grinder head is controlled by the standard brake device. This portable machine can be used for production work by the manufacturer or refinisher and can be bolted to any type of block which still is in the car.

New Mount for Speed Cops

A NEW motorcycle model known as "Scout 45" and also called the "Police Special" has been announced by the Indian Motorcycle Co. This motorcycle has a two cylinder engine of

New Scout 45 Indian Motorcycle

45 cubic inch displacement and is said to be capable of a speed of between 75 and 80 miles an hour. The pistons are of aluminum and weigh 11 oz. A number of other improvements have been incorporated in this model to prevent vibration at high speed.

Studebaker Steering and Engine Refinements

A NEW style of insulating the steering mechanism from road shocks is now incorporated in the steering gear of all three Studebaker chassis. On the horizontal operating shaft of the steering gear, a rubber bushing is fitted over the splined end of the shaft which sets into a corresponding aperture at the upper end of the pitman steering arm. The rubber bushing is designed so that there is a 2½ degree movement of the steering arm in compressing the rubber before the movement is transmitted to the metal of the splined shaft.

Changes on the engines of all three Studebaker models include the formation of the intake hot spot of aluminum in place of cast iron used previously. Certain models have a dash manifold heat control. The lever for operating the manifold valve is grouped on a special panel along with the choke and spark control. The adoption of a manual spark advance of seven degrees is new to these cars.

Remington Gasoline Gage

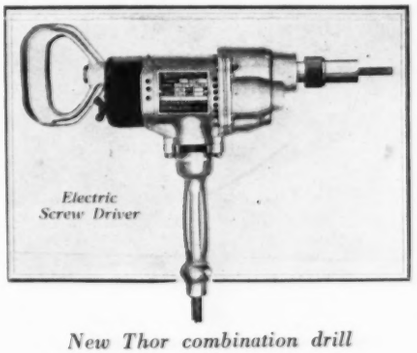
A GASOLINE gage operating on the hydrostatic principle, but having some novel features, is being made by the Rectifier Mfg. Co., 1112 S. Michigan Ave., Chicago. It can be installed on any car and gives accurate readings regardless of the size of the tank. When installed the gage will read empty when tank is empty. As the tank is filled the first time the adjusting screw on the back of the case of the gage is turned until the indicator shows "full." The screw adjustment changes the resistance of the diaphram so that the full reading will be obtained with a shallow tank of say 7 inches or a deep tank of say 12 inches.

Another feature of the gage is the piping which consists of a large coil of tubing and a very small pipe connecting with the diaphram. This construction is used so that the total variation of all the physical factors affecting air in the system, such as temperature changes, barometric changes, altitude changes, absorption, condensation and vapor tension changes are confined to a horizontal instead of a vertical plane. When expansion or contraction occurs it takes place mainly in the heavy spiral tube and causes very little vertical rise.

Thor Combination Electric Drill

BY means of sockets that interchange with the Jacobs chuck on the Thor drill, this drill is capable of running up and setting nuts. Not only will this new drill serve as a speed wrench, but as the chuck will take screw driver blades as well as drills it can also be used for driving screws.

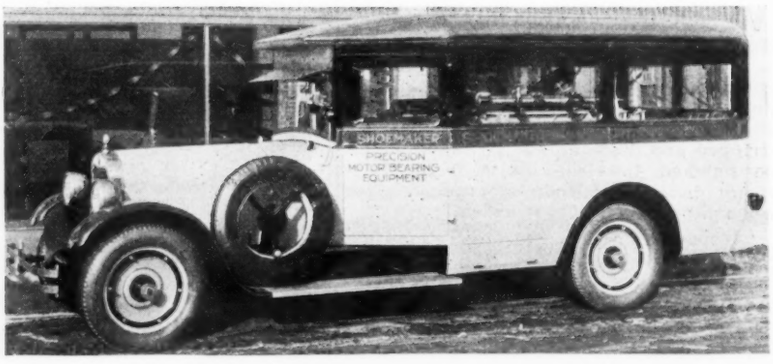
This tool has been developed as a result of the universal need for an article that can drill holes, drive screws, and speed up nuts and set them tight.



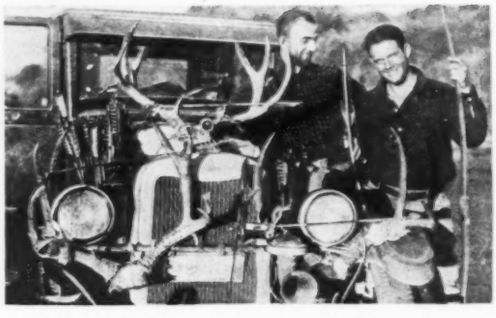
New Thor combination drill

ALL AROUND OUR COUNTRY

ALCOHOL FOR SALE? NO! Uncle Sam's prohibition director, Col. Ira L. Reeves says it isn't right and shows one of the boys the kind of sign that should be displayed

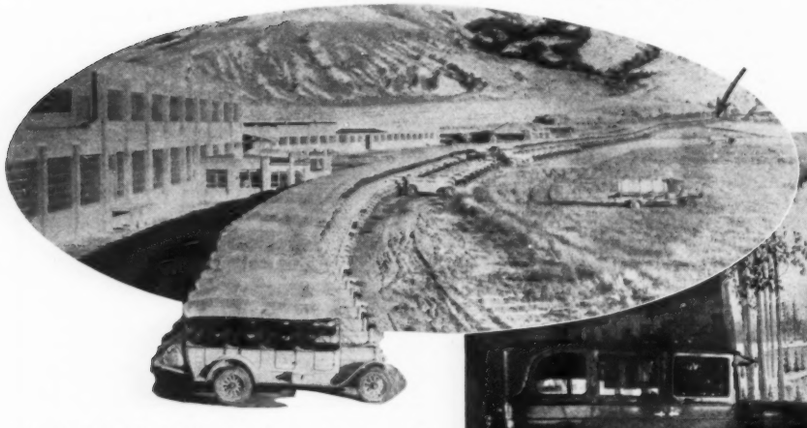


AN AUTOMOTIVE DEMONSTRATION CAR for the Shoemaker Automotive Equipment Company built by the Henney Company of Freeport, Ill., carries the complete Shoemaker line and also provides pullman car accommodations for its crew of two men



COMBINING THE ANCIENT WITH THE MODERN. Hunting with bows and arrows from a Chevrolet sedan in Northern Arizona

PHYLLIS HAVER shows the Studebaker Atalanta how to do her stuff. For looks Phyllis should give the ancient Greek Heroine a hard run, and when it comes to posing—well, we'll bet Atalanta could not have done a better job



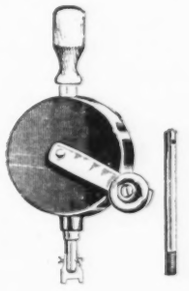
321 WHITE BUSSES lined up side by side, form a line which extends almost to the vanishing point. The fleet belongs to the Yellowstone Park Transportation Co.

A WINTER SHOW WINDOW in which the painted curtain in the background is blended into the cotton batting foreground so well that one can hardly find the join

NEW EQUIPMENT for SHOPS

Spraker Valve Grinder

Spraker Manufacturing Co., Indianapolis, recommends its new Spraker Valve Grinder for speed and ease of operation. Positive action is assured by three driving points, it has a ball bearing end thrust and six reversing motions to each turn of the crank. The grinder will fit all sizes of valves as it comes with one short and one extra long stem and two driving points. Price $2.50.



Spraker Valve Grinder

Shaw Tappet Take-Up Tool

Made by P. N. Shaw & Company, 492 East 108th street, Cleveland, Ohio, the Shaw Tappet Take-up Tool for adjusting tappets on overhead valve engines is a combination socket wrench and screw driver designed especially for this particular operation. This tool is said to permit quick and easy tappet adjustments while readjustments may be made without removing the tool. It is recommended by the manufacturers as a handy, time-saving shop device.

The Spraker Kit

A complete set of reamers with interchangeable handles and pilots constitutes the Spraker Kit, offered to the trade by the producers, the Spraker Mfg. Co., Indianapolis. The kit is designed to supply the mechanic with a cutter for every size valve up to truck sizes. Price complete, including box in which outfit is packed, $15.

Williams Electric Vulcanizer

A compact electric vulcanizer which will take most sizes of tires is being placed on the market by The Williams Foundry & Machine Company of Akron, Ohio. In this outfit steam is generated in a self-contained steel boiler by means of electric heating elements. The steel boiler, thermostatic control and two additional safety devices, in the opinion of the manufacturer, remove this from the class of equipment which is causing vulcanizers much trouble with state boiler inspectors.

This new outfit is furnished complete with extra shells and bead molds to properly cure all balloon sizes from 4.40 to 6.75, inclusive. The bead molds and reducing shells are furnished regularly in polished aluminum, but can be polished steel if desired.

Additional bead molds can be provided to handle high pressure tires from 4½ to 6 inch inclusive in this same single cavity mold. The mold opening is of sufficient depth to take flat tread tires, using extra flat tread inserts which have been designed especially for the machine.

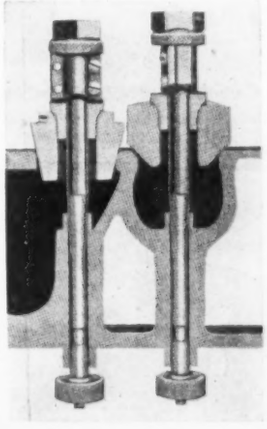
Hydraulic Valve Lifter

Green Automotive Sales, 1018 Commonwealth Avenue, Boston, have added a new type of valve lifter known as the Whittz Hydraulic. It is adapted to cars, trucks and tractors and will lift and hold in raised position two, four, six or more valve springs, according to the requirement. An arm to engage the valve spring washers is integrally cast with a plunger fitted into an accurately machined base which, in turn, is fitted to engage a grease-pressure gun so that application of grease under pressure will raise the plunger, cross-arm and valve spring washers to the desired height for removal of the valve spring keys.

When in raised position a pin is inserted in a hole in the plunger and pressure is removed so pin rests securely on the base, although if desired a ratchet clamp is supplied to be inserted between cross-arm and base to catch the cross-arm and hold it in the position desired. Either method relieves grease pressure and lifter is in position to hold the valve springs as long as required. Prices are $5 for Mack AB trucks, $6 for Mack AC trucks, each lifting two valves at a time; $8 for Mack AB bus and $6 for Cadillac No. 1, each lifting four valves at a time. Other models are under construction.

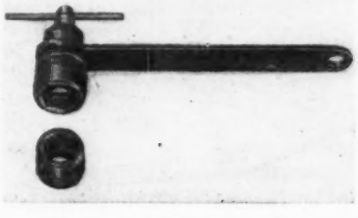
Rigid Master Valve Seater

A valve reseating tool which is said to be accurate and render highly satisfactory service is being made by the Howser Valve Tool Mfg. Co., La Porte, Ind. It is known as the Rigid Master Valve Seater. Accuracy comes through the fact that the device centers itself true in guide without lost motion. Perfect location is insured by the fact that the cutter is screwed on a taper, while the tool's rigidness permits it to smooth up a chattered valve seat. It machines an even margin the same as a lathe. The mechanic may adjust friction in accordance with requirements of the work.

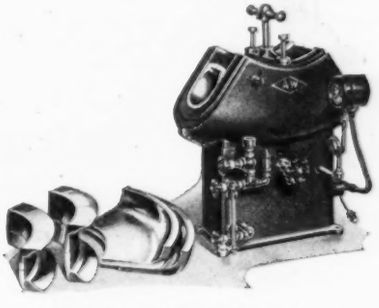


Rigid Master Valve Seater

The Spraker Kit



Shaw Tappet Take-up Tool



Williams Electric Vulcanizer

NEW ITEMS for the TRADE

Emergency Spare Tire

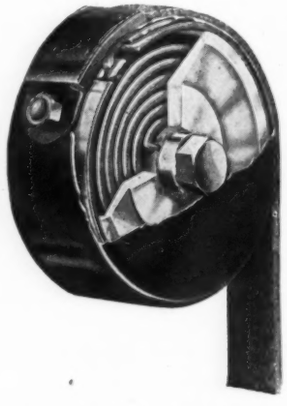
CUSHIONED with wooden blocks held firmly by an inner band of channel iron to prevent dislodgment and an outer band of steel "shrunk on," the emergency spare tire is designed for trouble service that the car owner may always carry with him. It is made by the Economy Electrical Mfg. Co., Kansas City, Mo., and takes the place of the usual rubber "spare." It will fit Hayes, Kelsey, Jaxon or Firestone wheels and fits any tire carrier. Prices are $2.95 per tire for the 30 by 3½ and 31 by 4 high pressure sizes and $3.95 for balloon sizes, 29 by 4.40 and 30 by 4.75. The company's output at present is confined to these sizes but a tire suitable for heavier trucks will soon be ready, it is announced.

Cleveland Shock Absorber

THE manufacturers of the Cleveland Shock Absorber recommend this device as being built for proper control of the car springs' rebound. Control is said to be easy and gradual without jerking. All working parts are enclosed in a dust and water proof housing. The entire load is carried on a rigid brake drum and brake band principle, the frictional control being adjustable to suit the weight of the car to which the devices are applied. Tension also is easily adjusted. Standard fittings are used and fit all makes of cars. It is not necessary to drill new holes for installation. The shock absorbers sell at $30 per set of four. Made by the Cleveland Shock Absorber Co., Cleveland, O.

New AC Long Life Spark Plug

ADDED to the line of the AC Spark Plug Company, Flint, Mich., is a new "Long Life" spark plug designed especially for bus, truck, marine, and other heavy duty equipment. The knife edge ring of the recessed insulator is said to attain sufficient heat to burn away oil deposits and thus minimize carbon troubles. The extra large center electrode because of its size and improved alloy has long life. The baffle at the firing end shields the insulator and center electrode from full heat of explosion, which feature tends to insure cool running and add to the life of the electrodes and insulator. Extra large side electrodes are of the same improved alloy as the center electrode, insuring permanent width spark gap. Perfect thermal contact is effected by electrical welding to the shell, while the shape forms a natural drain for oil deposits. These plugs come only in three sizes: ⅞ in. long thread, Type D; Metric, Type G; and ⅞ in. long body, Type I.



Cleveland Shock Absorber

Presto No. 200 Cigar Lighter

METAL Specialties Mfg. Co., 338-352 N. Kedzie Avenue, Chicago, has incorporated a number of new features in its Presto No. 200 Full Automatic Cigar Lighter. They include: Fahnstock terminals for electrical connections, making the connections secure and trouble-proof; safety fuse to eliminate possibility of short circuiting; case finished in new green crackle, duco lacquered; exposed nickel parts made of brass nickel plated; tip lights instantly and consumes little current.

The lighter is furnished with 5 feet of flexible electric wire long enough to reach occupants of the rear seat. Cord rewinds in reel when not in use. Price complete with clamp-on bracket $4.

New Line of Meters

A NEW line of voltmeters, ammeters, milli-ammeters, milli-voltmeters and volt-ammeters is announced by the Roller-Smith Company, 233 Broadway, New York City, in their Bulletin No. 110. These meters are known as type HTD and are small enough to be readily carried in pocket, or tool kit. These instruments are light in weight and very compact and are designed with sufficient accuracy for all ordinary tests as well as being made rugged enough to withstand ordinary shop usage. Further information or a copy of the bulletin which gives prices and details of all instruments may be obtained from the Roller-Smith Company.

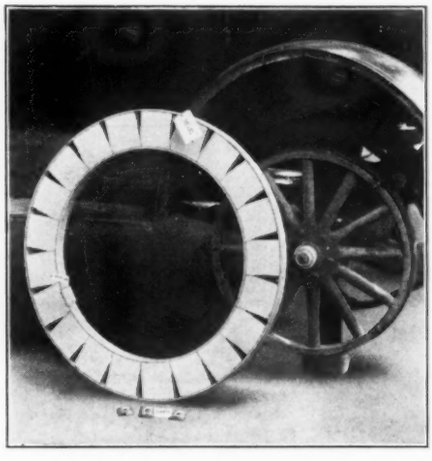
St. Pierre Giant Plier

DESIGNED for opening and closing all cross chain hooks from the smallest passenger car sizes to the largest truck chain sizes the St. Pierre "Giant" Chain Plier is a product of the St. Pierre Chain Corp., Worcester, Mass. This is a substantial tool which the makers price at $4.

AC Heavy Duty Spark Plug

Presto No. 200 Cigar Lighter

St. Pierre Giant Chain Plier



Emergency Spare Tire

The READERS CLEARING HOUSE

Questions And Answers On Dealers Problems

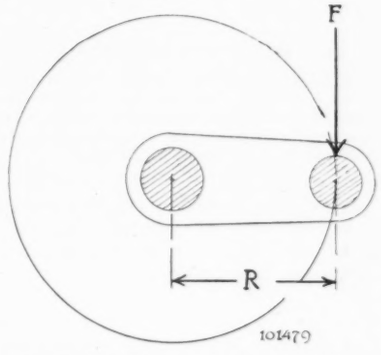
Relations of Torque Power and Speed

I would like authoritative information on the following point which has caused considerable discussion. B claims that in an automobile engine the speed and power are the same. He claims that in the power and speed curves of an engine both lines will break downward at the same point, or in other words an engine will develop its maximum torque and power at its maximum R.P.M.

C takes the position that an engine may develop its maximum torque and power at a certain number of R.P.M. and still be capable of higher speed, and gives the Chrysler 70 engine as an example, stating that it develops its maximum of 68 h.p. at 3000 R.P.M. but can turn over much faster. He states in fact that at a car speed of 75 miles per hour with a 4.6 differential ratio and 30 by 5.77 tires the engine is turning around 3800 R.P.M. or better.

Have endeavored to make my question clear and will appreciate answer by return mail with statement as to whether B or C is correct. If possible give some example of power and speed on present automobile engine—G. C. DuVall, Fennville, Mich.

BEFORE rendering an opinion we think it would be well to go into the definitions of torque, horse power and speed. There is not much question about the definition of speed, for it has to do with the rapidity with which an object changes its position. To illustrate these things we have made a simple sketch represented by a circle showing the path of the crank pin in a one cylinder engine. The length from the center of the main bearing to the center of the crank pin is represented by the letter R which stands for the radius of the circle, and the force exerted by the connecting rod on the crank pin is represented by the letter F which stands for force. Suppose for example that R is 3 in. or ¼ of a ft. and F is a force of 4 lbs. If we multiply these two together we get ¼ of 4 or 1 lb. ft. torque. Then torque is the turning effort exerted by a force acting about a radius. If either the radius or the force increases in value, then the torque is greater. In figuring the nature of torque, we do not have to consider whether the crank is turning or not. For if the force continues to act at the radius R we have the torque regardless of whether there is a motion or not. For example, if a man tries to crank a cold engine, and is unable to make it turn, it does not signify that he is not exerting considerable effort, even if the effort is unsuccessful in starting the engine.



Crankshaft diagram used to show what torque is

Mechanical work is defined as force acting through a distance, so from a mechanical standpoint the man trying to crank the engine has done no work if he is unable to move it, although he may have caused himself considerable exertion. The point is that from a practical standpoint he has not accomplished anything. Now suppose we take the circle diagram again and figure that the force F is able to rotate the engine and that the circumference of the circle is 1 ft. so that in one revolution the force F moves through a distance of 1 ft. Then if the force F should still be 4 lb. and it would move through a distance of 1 ft. we would have 4 ft. lbs. of work done. Note that work is measured in ft. lbs. or distance times force, while torque is measured in lbs. ft. or force times a radius.

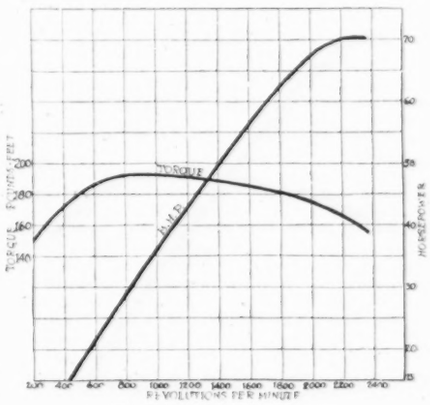
What a Horse Power Is

WE now come to the definition of horse power and find that it is defined as the ability to do 33,000 ft. lbs. of work in a minute. We will not put down the formula for torque and horse power. By our definition we find that

T equals F x R.

The distance around the circle R will be 3.1416 x D where D equals the diameter, but D equals 2R. Therefore the distance around the circle equals 3.1416 x 2R or 6.2832R. In order to get the amount of work done when the force F moves around the circumference we have to multiply it by the circumference. We might then put down the formula that W. equals CF where C is the circumference of the circle. Now putting in the value of C which is 6.2832R we find that W=6.2832RF. We found, however, that R times F is equal to torque. For this reason W or the work done per revolution equals 6.2832T. The horse power will be equal to the work done in one revolution multiplied by the number of revolutions and divided by 33,000, which is the number of ft. lbs. of work which would be done in a minute. We therefore have the formula H.P. equals

$$\frac{6.2832T \times R.P.M.}{33{,}000}$$



Typical engine curves

We are showing horse power and torque curves taken from a certain Continental engine and it will be noticed that the torque is greatest at 900 R.P.M. while the horse power is greatest at 2300 R.P.M. If we care to use the formula just given and put in the value of 192 lb. ft. which is the peak of the torque curve, we find that the horse power figures out to be 32.8 and if at the 900 R.P.M. point you trace up to the horse power curve you will find that it checks pretty closely with 32.8.

If you then take the torque of 160 lb. ft. at 2300 R.P.M. and put it in the formula, you will find that the horse power figures out about 70 as shown at the peak of the horse power curve.

If you have been able to endure this long explanation you will probably come to the conclusion that C is correct in his statement. Horse power and torque curves are not freely given out by automobile manufacturers although they are usually supplied by the engine makers.

NO MORE REVOLUTIONS

With the gear ratio the same how many less revolutions, if any, will an engine with a one inch longer stroke make in traveling a mile?—Joe Miller, DeKalb, Mo.

THE revolutions of the engine will be exactly the same. However, with a longer stroke the piston will have traveled a greater distance up and down in the cylinder while the engine goes a mile. To figure the exact increase in piston travel we would have to know the exact data in regard to the car in question.

NEW ITEMS for the TRADE

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CUSHIONED with wooden blocks held firmly by an inner band of channel iron to prevent dislodgment and an outer band of steel "shrunk on," the emergency spare tire is designed for trouble service that the car owner may always carry with him. It is made by the Economy Electrical Mfg. Co., Kansas City, Mo., and takes the place of the usual rubber "spare." It will fit Hayes, Kelsey, Jaxon or Firestone wheels and fits any tire carrier. Prices are $2.95 per tire for the 30 by 3½ and 31 by 4 high pressure sizes and $3.95 for balloon sizes, 29 by 4.40 and 30 by 4.75. The company's output at present is confined to these sizes but a tire suitable for heavier trucks will soon be ready, it is announced.

Cleveland Shock Absorber

THE manufacturers of the Cleveland Shock Absorber recommend this device as being built for proper control of the car springs' rebound. Control is said to be easy and gradual without jerking. All working parts are enclosed in a dust and water proof housing. The entire load is carried on a rigid brake drum and brake band principle, the frictional control being adjustable to suit the weight of the car to which the devices are applied. Tension also is easily adjusted. Standard fittings are used and fit all makes of cars. It is not necessary to drill new holes for installation. The shock absorbers sell at $30 per set of four. Made by the Cleveland Shock Absorber Co., Cleveland, O.

New AC Long Life Spark Plug

ADDED to the line of the AC Spark Plug Company, Flint, Mich., is a new "Long Life" spark plug designed especially for bus, truck, marine, and other heavy duty equipment. The knife edge ring of the recessed insulator is said to attain sufficient heat to burn away oil deposits and thus minimize carbon troubles. The extra large center electrode because of its size and improved alloy has long life. The baffle at the firing end shields the insulator and center electrode from full heat of explosion, which feature tends to insure cool running and add to the life of the electrodes and insulator. Extra large side electrodes are of the same improved alloy as the center electrode, insuring permanent width spark gap. Perfect thermal contact is effected by electrical welding to the shell, while the shape forms a natural drain for oil deposits. These plugs come only in three sizes: ⅞ in. long thread, Type D; Metric, Type G; and ⅞ in. long body, Type I.

Presto No. 200 Cigar Lighter

METAL Specialties Mfg. Co., 338-352 N. Kedzie Avenue, Chicago, has incorporated a number of new features in its Presto No. 200 Full Automatic Cigar Lighter. They include: Fahnstock terminals for electrical connections, making the connections secure and trouble-proof; safety fuse to eliminate possibility of short circuiting; case finished in new green crackle, duco lacquered; exposed nickel parts made of brass nickel plated; tip lights instantly and consumes little current.

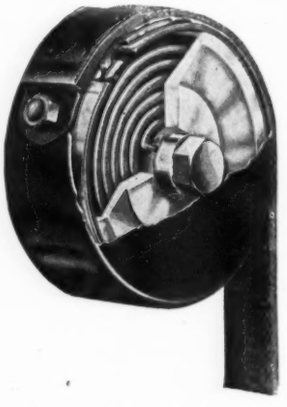
The lighter is furnished with 5 feet of flexible electric wire long enough to reach occupants of the rear seat. Cord rewinds in reel when not in use. Price complete with clamp-on bracket $4.

New Line of Meters

A NEW line of voltmeters, ammeters, milli-ammeters, milli-voltmeters and volt-ammeters is announced by the Roller-Smith Company, 233 Broadway, New York City, in their Bulletin No. 110. These meters are known as type HTD and are small enough to be readily carried in pocket, or tool kit. These instruments are light in weight and very compact and are designed with sufficient accuracy for all ordinary tests as well as being made rugged enough to withstand ordinary shop usage. Further information or a copy of the bulletin which gives prices and details of all instruments may be obtained from the Roller-Smith Company.

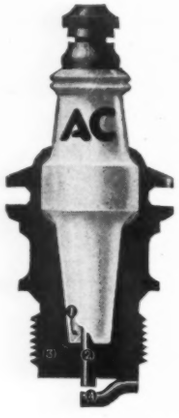
St. Pierre Giant Plier

DESIGNED for opening and closing all cross chain hooks from the smallest passenger car sizes to the largest truck chain sizes the St. Pierre "Giant" Chain Plier is a product of the St. Pierre Chain Corp., Worcester, Mass. This is a substantial tool which the makers price at $4.



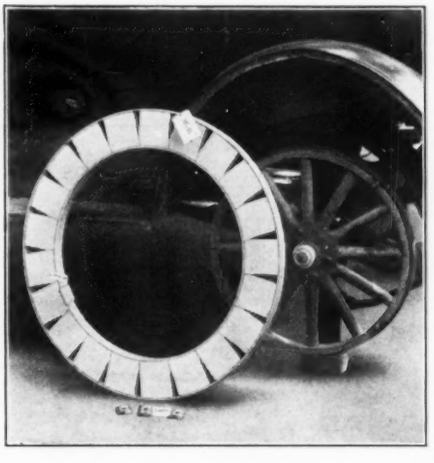
Cleveland Shock Absorber

Presto No. 200 Cigar Lighter



AC Heavy Duty Spark Plug

St. Pierre Giant Chain Plier



Emergency Spare Tire

The READERS CLEARING HOUSE

Questions And Answers — On Dealers Problems

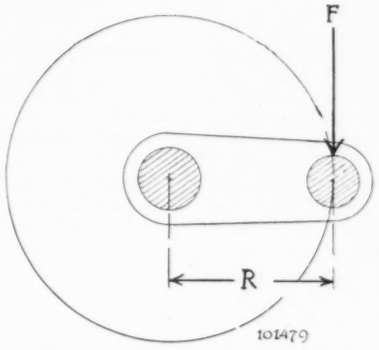
Relations of Torque Power and Speed

I would like authoritative information on the following point which has caused considerable discussion. B claims that in an automobile engine the speed and power are the same. He claims that in the power and speed curves of an engine both lines will break downward at the same point, or in other words an engine will develop its maximum torque and power at its maximum R.P.M.

C takes the position that an engine may develop its maximum torque and power at a certain number of R.P.M. and still be capable of higher speed, and gives the Chrysler 70 engine as an example, stating that it develops its maximum of 68 h.p. at 3000 R.P.M. but can turn over much faster. He states in fact that at a car speed of 75 miles per hour with a 4.6 differential ratio and 30 by 5.77 tires the engine is turning around 3800 R.P.M. or better.

Have endeavored to make my question clear and will appreciate answer by return mail with statement as to whether B or C is correct. If possible give some example of power and speed on present automobile engine—G. C. DuVall, Fennville, Mich.

BEFORE rendering an opinion we think it would be well to go into the definitions of torque, horse power and speed. There is not much question about the definition of speed, for it has to do with the rapidity with which an object changes its position. To illustrate these things we have made a simple sketch represented by a circle showing the path of the crank pin in a one cylinder engine. The length from the center of the main bearing to the center of the crank pin is represented by the letter R which stands for the radius of the circle, and the force exerted by the connecting rod on the crank pin is represented by the letter F which stands for force. Suppose for example that R is 3 in. or ¼ of a ft. and F is a force of 4 lbs. If we multiply these two together we get ¼ of 4 or 1 lb. ft. torque. Then torque is the turning effort exerted by a force acting about a radius. If either the radius or the force increases in value, then the torque is greater. In figuring the nature of torque, we do not have to consider whether the crank is turning or not. For if the force continues to act at the radius R we have the torque regardless of whether there is a motion or not. For example, if a man tries to crank a cold engine, and is unable to make it turn, it does not signify that he is not exerting considerable effort, even if the effort is unsuccessful in starting the engine.



Crankshaft diagram used to show what torque is

Mechanical work is defined as force acting through a distance, so from a mechanical standpoint the man trying to crank the engine has done no work if he is unable to move it, although he may have caused himself considerable exertion. The point is that from a practical standpoint he has not accomplished anything. Now suppose we take the circle diagram again and figure that the force F is able to rotate the engine and that the circumference of the circle is 1 ft. so that in one revolution the force F moves through a distance of 1 ft. Then if the force F should still be 4 lb. and it would move through a distance of 1 ft. we would have 4 ft. lbs. of work done. Note that work is measured in ft. lbs. or distance times force, while torque is measured in lbs. ft. or force times a radius.

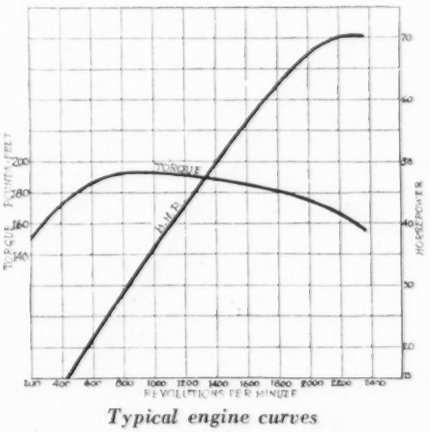
What a Horse Power Is

WE now come to the definition of horse power and find that it is defined as the ability to do 33,000 ft. lbs. of work in a minute. We will not put down the formula for torque and horse power. By our definition we find that

T equals F x R.

The distance around the circle R will be 3.1416 x D where D equals the diameter, but D equals 2R. Therefore the distance around the circle equals 3.1416 x 2R or 6.2832R. In order to get the amount of work done when the force F moves around the circumference we have to multiply it by the circumference. We might then put down the formula that W. equals CF where C is the circumference of the circle. Now putting in the value of C which is 6.2832R we find that W=6.2832RF. We found, however, that R times F is equal to torque. For this reason W or the work done per revolution equals 6.2832T. The horse power will be equal to the work done in one revolution multiplied by the number of revolutions and divided by 33,000, which is the number of ft. lbs. of work which would be done in a minute. We therefore have the formula H.P. equals

$$\frac{6.2832T \times R.P.M.}{33{,}000}$$



Typical engine curves

We are showing horse power and torque curves taken from a certain Continental engine and it will be noticed that the torque is greatest at 900 R.P.M. while the horse power is greatest at 2300 R.P.M. If we care to use the formula just given and put in the value of 192 lb. ft. which is the peak of the torque curve, we find that the horse power figures out to be 32.8 and if at the 900 R.P.M. point you trace up to the horse power curve you will find that it checks pretty closely with 32.8.

If you then take the torque of 160 lb. ft. at 2300 R.P.M. and put it in the formula, you will find that the horse power figures out about 70 as shown at the peak of the horse power curve.

If you have been able to endure this long explanation you will probably come to the conclusion that C is correct in his statement. Horse power and torque curves are not freely given out by automobile manufacturers although they are usually supplied by the engine makers.

NO MORE REVOLUTIONS

With the gear ratio the same how many less revolutions, if any, will an engine with a one inch longer stroke make in traveling a mile?—Joe Miller, DeKalb, Mo.

THE revolutions of the engine will be exactly the same. However, with a longer stroke the piston will have traveled a greater distance up and down in the cylinder while the engine goes a mile. To figure the exact increase in piston travel we would have to know the exact data in regard to the car in question.

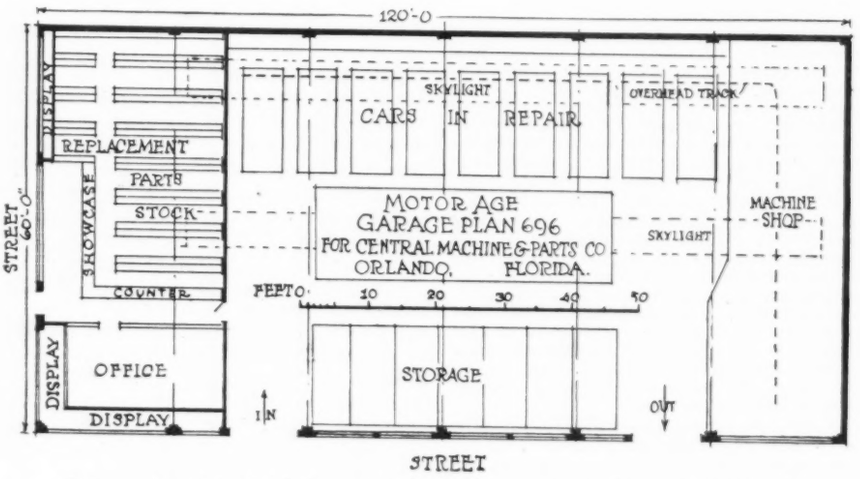
Planning Your New Building

Replacement Parts Dealer with Large Repair Business Wants New Building

By Tom Wilder

We want to build on a corner lot 60 by 120 ft. The street on the side of lot has the most traffic. We do not sell cars nor do we wash cars, so a wash rack need not be considered. We require approximately 1200 sq. ft. for parts store, with suitable office which we think should be in the corner. We also require approximately 1000 sq. ft. for machine shop, welding dept., and rebabbitting dept. Balance of space to be used for repair shop and work in course of completion. Driveway to shop should be on the side with exit and entrance.

Our machine shop equipment consists of cylinder grinder, piston grinder, crankshaft grinder, two ten foot lathes, two drill presses, emery wheel, hydraulic press, brake lining machine, reaming machine, rebabbitting machine and space for blacksmith forge and anvil. We are enclosing a rough sketch of what we want to do, but perhaps you can give us a diagram in detail that will be much better.—Central Machine & Parts Co., 200 W. Robinson Ave., Orlando, Fla.



The weak point of this layout is the limited amount of storage space. In some cases the storage and repair departments might change places to advantage

AFTER taking away the space required for replacement parts and for the machine shop, the area remaining for repair work and for storage seems rather limited and we are wondering if it would not be possible to install the greater amount of your replacement parts stock upon a balcony that would either extend along the side of the building next to the street or be double decked over the present space so that the space could be cut down materially.

In this way 8 ft. could be clipped off of the rear part of the stockroom and office and the roof elevated over the space between the front wall and the first truss. The balcony would then extend the complete width of the building and from the truss to the front of the showcase.

Another alternative would be to extend the balcony along the side of the building from front to rear over the cars in storage, using the space now occupied by the stockroom for machine shop so that the whole street side of the building could be used for storage space.

In arranging machines in the machine shop, if you use it as we have laid it out in our plan we would suggest that the lathe, grinding machine and all heavy machines be arranged along the back wall perpendicular to it or possibly at an angle to it, leaving the front part of the space open for the installation of automotive service equipment. The forge and welding equipment might be in the extreme corner toward the street.

Skylights will be absolutely necessary in this room and we have suggested some sort of monitor skylight along the center or ridge of the roof with another skylight of the type that takes the roof surface along the back. These two skylights should give you comparatively even light throughout the floor and plenty of it.

We have not arranged space for toilet rooms for office or shop and would suggest that if the balcony is used, they be placed upon it, otherwise you can take the space from the department that seems best able to provide it.

LEGAL QUESTIONS ANSWERED

By *Wellington Gustin*

When Dealer Indorses Paper

Would you kindly advise us whether or not a finance company can recover from a dealer who signed a deal with recourse for the unpaid balance of the note and mortgage, when neither the purchaser nor the car can be located by the finance company, or is it necessary for the finance company in order to collect the unpaid balance to produce the car to the dealer? If you have any record of any court decisions of a case of this kind we would appreciate your advising us.—Iowa Reader.

YOU must look to your agreement with the finance company for answer to your problem. From your brief statement you indorsed the papers with recourse. This is an expression that you admit your own liability on failure of payment by purchaser of car and maker of notes and mortgage. Now if there is no agreement for the indorsee, or finance company, to locate, reclaim and return the car to you, its indorser, then I am of the opinion it is not in duty bound to do so. In suit on the defaulted notes recovery of the car would not be involved and you are ultimately responsible. The indorsee is not guardian of the car, and upon total loss of the car, or otherwise, you would be responsible, therefore it is ultimately up to you to protect yourself by recovering the car if possible. Of course, should this have been an agreement specifically as to return of the car by the finance company, that provision would be valid and would govern.

You might be able to force finance company to pursue its remedy as far as possible against the purchaser, but since you admit the party cannot be located that question does not enter as a practical thing.

STUDEBAKER NUMBER LOCATION

Could you tell us what the engine number should be on a Studebaker roadster, serial No. 1085246? Where can this engine number be found?—Vanderwalker Bros., Clintonville, Wis.

WE assume you want the serial number of the car which in this case is on the engine. If you lift the right side of the hood and at the front of the engine look over the starter and down on the crankcase you should see a boss on the crankcase on which the serial number is stamped. According to our records the number you give indicates a 1923 model EM, Light Six.

Answers to Readers' Questions

Freeing Up Frozen Brakes

I recently drove a Dodge Brothers coupe into a garage and set the brakes. The next time I went to use the car I found the brakes were frozen. Starting the engine and applying power broke one wheel loose, but the left rear wheel was still stiff with the rear end jacked up. Could you tell me how to loosen the other wheel?—John G. Kupyar, 337 Washington St., Youngstown, Ohio.

THE freezing is either due to water and slush getting between the brake band and the brake drum and then freezing in a cold garage or else it is due to rusting of the brake shaft and rods. If you think the trouble is due to freezing you might try jacking up only the wheel which is stuck and allowing the other one to be on the floor. It would also be necessary to put blocks in front of and in back of the wheel which is on the floor to keep the car from being driven. Then if you apply the power in little jerks you may be able to loosen the wheel which is frozen. You will have to do this carefully to keep the car from leaping over the block and running into something.

It might be advisable to use a blow torch on the brake band so as to thaw it out. You could also apply a little heat to the brake drum. If the trouble is due to rusting it might be advisable to use penetrating oil at the various brake rods and joints and disconnect the rods and try out the various parts and see which is stuck. In this way it would not take you long to find out where the trouble is and then it will be a job of freeing up the parts with oil.

STROMBERG DRAIN PLUGGED

We have a new Stromberg carburetor, model M-2. It has a small hole drilled in the bottom of the mixing chamber, but a ⅛ in. pipe plug stops up this hole. Should such a plug be used? In the older M-2 carburetors there is both the hole and the plug. What is the purpose of the hole?—Gordan E. Lyon, Crompton, R. I.

THE hole which you refer to and which someone has plugged up is put there for a drain. The reason that this hole is threaded is so that the drain can be connected with tubing which will lead any excess gasoline overboard on installations such as the Buick or similar jobs where the exhaust pipe passes to the front of the car and then curves down and to the rear passing under the carburetor. If in your installation the exhaust pipe passes under the carburetor this plug should be removed and tubing inserted in the hole and so located that any gasoline overflowing could not possibly get on the exhaust pipe. If the exhaust pipe does not pass under the carburetor or very close to it, you will be perfectly safe in just removing the plug.

LOCOMOBILE 48 TIMING

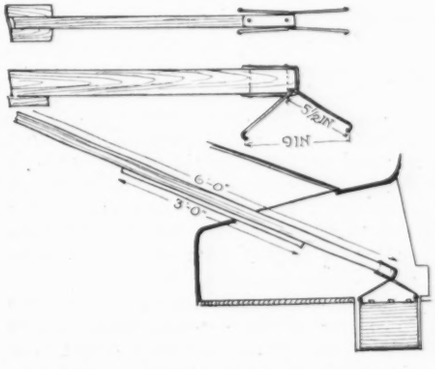
We are endeavoring to get the correct factory timing for both the intake and exhaust valve on a Locomobile type 48, series 7, and will very much appreciate it if you can give us this information. As there are no marks on the flywheel of this car we would like to have this information in terms of piston travel.—W. G. Peterman, Subway Garage, 414 Twelfth St., Sacramento, Cal.

THE exhaust valve opens when the piston is within ¾ of an inch of bottom dead center on the power stroke and closes when the piston reaches top dead center of the exhaust stroke. The inlet opens when the piston is $\frac{3}{32}$ of an inch down on the intake stroke and closes when the piston has tarveled ¾ of an inch up from bottom dead center on the compression stroke.

SHOP KINKS
IDEAS
That have been Found Useful

A BATTERY EXTRACTOR

Without some special device it is very hard to get a battery out of a Ford coupe or roadster. I remove and replace Ford batteries with the outfit shown, which has battery carrier mounted at one end and has sufficient length so that you get enough leverage to easily remove or replace the battery.—Lee Twist, Ridgefield, Wash.



Readers of MOTOR AGE *are invited to submit ideas that they have found useful in doing some particular service job in the shop in a better or quicker way. For each one published $2.00 will be paid. Whenever possible the idea should be accompanied by a sketch or diagram from which a drawing can be made.*

Willys-Knight Sleeve Valve Timing

Will you kindly advise me with regard to the timing on Willys Knight models 20, 20A and 64.—Chicago Subscriber.

THE same timing instructions that apply to one of the models mentioned will also hold good on the other two. In timing the valves of the Willys-Knight it is necessary to set the flywheel on the mark 1-4 E.C. (exhaust closing on cylinders 1 and 4). Then remove the exhaust manifold and drop a light into the cylinder so that it is easy to see when the exhaust port is opened or closed. Then turn sprocket which drives the eccentric shaft in a clockwise direction, which is the normal direction it will go when the engine is running. At the same time watch the action of the exhaust sleeve. When the exhaust port has opened and then is just about to close with the sleeve coming down, stop the rotation of the eccentric shaft gear.

When the main bearings of an engine are quite free it is sometimes found that this moving of the sleeves will also move the pistons and get the crankshaft out of time. For this reason it is well after setting the exhaust sleeve to again look at the flywheel to see that it has not moved from the 1-4 E.C. setting. With both the crankshaft and the eccentric shaft in their proper position the chain may be applied. If the engine is left in this position without being moved it is also the firing position of the No. 1 cylinder. If it is not convenient to drop a small light into the cylinder in order to see a small crack of light when the exhaust valve is closing, a piece of thin paper like a cigarette paper may be used and just at the instant this is pinched is the instant at which the exhaust sleeve is in the proper position.

KEEP YOUR BACK COPIES

Please give me the formula for radiator anti-freeze solution. Can alcohol and glycerine be used together and what is gained by using the glycerine? Is either one injurious to the radiator?—Marrowbone Garage, Marrowbone, Ky.

IF you will refer to an article on anti-freeze solutions beginning on page 20 of the September 30th issue of MOTOR AGE, all of your questions will be fully answered. Briefly a 40 per cent solution of denatured alcohol in water will protect radiators against freezing down to a temperature of zero. A 30 per cent solution will give protection to about 10 above zero. The addition of glycerine to the solution tends to retard evaporation. Neither glycerine nor alcohol is injurious to the radiator.

Clearing Up Electrical Troubles

Edited By A. H. Packer

Charging Batteries with Hudson Generator

I have a motor generator taken from a model 6-40 Hudson and I would like to use this Delco generator to charge batteries. How will I have to connect same, using an ammeter? Would it make any difference if I leave the distributer connected as it is? Will use a one-quarter horse power A.C. motor, speed 1750 R.P.M. with 2¼ in. pulley to drive same. About what size pulley will I need on the generator to have it charge about 5 amp.? What direction will it have to run facing commutator?—William J. Beaudoin, Freda, Mich.

WE are showing a wiring diagram. The No. 6 terminal is the armature terminal while the No. 9 connects to the shunt field. We believe this machine is one which has a governor which cuts in resistance at high speed. If so, you may not need the external resistance we have shown. On the other hand if the charging current is too high you can connect in a resistance of this sort. If no resistance is needed then you can connect a plain wire from the No. 9 to the No. 6 terminal.

If you use an outside resistance be sure that you have the wires properly connected on the No. 9 and No. 6 terminals or you will be trying to send charging current through this resistance. The pulley on the generator should be from two to three times the size of the pulley you use on the A.C. motor. That means it can be from 4½ to 6¾ in. in diameter. The smaller the pulley the higher the speed of the generator will be and the more resistance you will need to hold the current down.

Your quarter horse power motor is hardly big enough to give very much charging current, although it may stand up with a charging current of 5 amp. When you first operate it, watch carefully and see that the motor does not get too hot. The operation of the distributer will do no harm except that it takes a slight amount of power to drive it. To determine the direction of rotation connect up the motor generator as we have shown and then short circuit the cutout so that battery current will run the generator as a motor. This will give the direction in which it should be driven to operate as a generator.

When a battery has the positive grounded does it make any difference how it is connected when charging?

IT does not matter how a battery is connected on a car or which terminal is grounded. When you take it out of the car and connect it on a charging line, you must always connect it so that the positive terminal of the charging device goes to positive battery. When a battery discharges, current comes out of the positive terminal and therefore, when charging, current must be forced in at the positive terminal due to the battery being connected to a source of current of higher voltage.

THE TIRES ARE INSULATORS

In an automobile how can the current flow through the ground when the car is insulated from the ground by the rubber tires.—New York Reader.

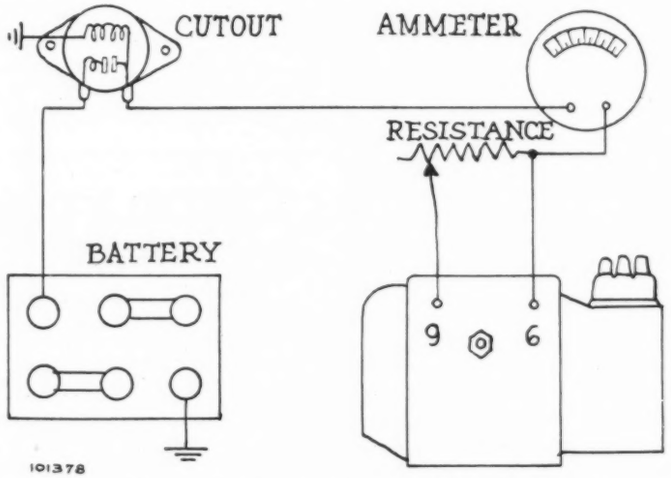
THE term "ground" has been adopted in describing the return circuit which uses the frame of the automobile instead of a second wire. As originally employed the ground return was used in light wiring or for power. For example a street car uses a trolley wire and then allows the current to return to the power house through the ground. Practically however, the steel rails carry most of the current back to the power house. It is possible however, to send current from a generator to a light by means of a wire and then run the return wire down into the ground and pick up the current at the generator by means of a similar wire or pipe driven into the ground.

When automobile electrical systems were first made the two wire system was used. Then it was decided that the frame of the car being a good conductor could be used instead of the return wire. Accordingly we call the frame of the car the ground because that was the name first given to a return circuit which did not use a wire. The rubber tires do insulate the car from the ground very effectively unless the tires should be wet.

Static Sparks and the Gas Tank

I have noticed that all gasoline trucks carry a chain that drags on the ground. Can you tell the reason for this?—Chicago Mechanic.

THE jarring of the truck shakes and splashes the gasoline in the tank compartment and the rubbing of the various drops of gasoline on each other seems to generate static electricity. With a chain dragging on the ground this static electricity can discharge to the earth. If this is not done there is danger of a spark occuring when the nozzle of the hose is applied at the pipe leading to the storage tank. This might possibly cause an explosion, and it is for the purpose of avoiding such a possibility that the ground chain is carried so that the static electricity can be discharged as fast as it is generated.



Wire resistance adapts motor generator for battery charging

ADJUSTED TOO CLOSE

What causes the vibrator to stick to the core of an ignition coil at times and cause the engine to stop? In order to keep the engine going it requires some one at the coil to keep vibrator working by striking it with one finger. Then it will work O. K. for a while.—Lawrence Colbress, Box 9, Glendive, Mont.

WE believe the vibrator is adjusted too close to the coil. If the iron part of the vibrator is allowed to touch the iron core of the coil it will cause sticking. Perhaps you have noticed how a piece of metal will stick to a magnet and the pull is very much greater than when the piece of iron is just a short way from the magnet. We believe if you adjust the vibrator so that the armature is a little farther away and then weaken the spring tension slightly, that you will overcome this trouble.

Make Sales *and* Get Prospects *at* Show, Says F. E. Moskovics

Manufacturer in Address to Dealers and Salesmen Gives Lessons in Making Contacts and Getting Orders

By LEWIS DIBBLE

"THE salesman who comes out of an automobile show without enough prospects to lay a good foundation for his year's business, is a pretty poor salesman," F. E. Moskovics, president of the Stutz Motor Car Company of America, Inc., told 1000 Detroit automobile salesmen on the eve of the opening of the Detroit Automobile Show. In his address the speaker gave many valuable points on salesmanship which he has gained in his experience which dates back to the beginning of the automotive industry, and which will be of interest to all MOTOR AGE readers.

"When the automobile show opens be prepared with every little bit of ammunition you can obtain so as to make the very best presentation of your car. The companies have spent millions of dollars focusing public attention on the automobile shows and people pay money to go there and buy. By all means keep yourselves in good condition. Keep your schedules. Get all the prospects you can. You'll profit if you properly use your time and energy," declared the speaker.

Business Is Sound

"The automobile business, today, is on a more sound footing than ever before. As an example, how many of you men have to go out now and sell a man on the idea that he ought to have an automobile?

"I want to criticize automobile selling as a concrete problem and I will start in with the floor day. If I were a good salesman I would consider it an affront to me if I had to stay on a salesroom floor any length of time. It would be an insult. I'm afraid I would feel like the boy who was kept after school. My idea of being a salesman is getting out and making contacts, and many of them."

As an example of what can be accomplished, Mr. Moskovics told how, as an experiment, he made a personal canvass of the Equitable building. While he did not use his business card, he did use his name, and in a single day made a total of 37 calls in which he succeeded in getting 32 interviews which resulted in six appointments for demonstrations.

"I was asked once by a magazine what was the qualification for a good salesman and I said 'the same as a chorus girl—two good legs.'"

Mr. Moskovics cited Seward Prosser as one of the three best salesmen in America. He rose to the presidency of the Bankers Trust Co.

"Do you think he made sales by standing on a salesroom floor? He did not."

As another example he cited Charles Schwab, who gained fame and fortune in steel, and who Mr. Moskovics described as his "boss." Mr. Schwab, he said, is about one of the busiest traveling men in the country. He knows that if he stayed in one spot that he would contact with but few, but by circulating around all the time he keeps in touch with the world and is thereby better equipped for his work.

Why Some Salesmen Fail

Next he told how salesmen many times fail to come into contact with good prospects simply because of their failure to get out and make contacts.

"We had an unusual experience at the Kansas City show several years ago. A visitor to the show, a farmer with his pants tucked inside his boots, came into our exhibit. The man in charge 'kidded him.' A little later the story went around that Locomobile had just sold one of its special show jobs for $16,000. On investigation I found that the farmer who had been 'kidded' out of our booth, because of his personal appearance, was the purchaser of the car. I wanted to satisfy myself and I finally found him sitting in the car. He talked with me and I finally asked him if he was sure he had selected the car he wanted and could afford it. He told me that he and his family had been out on the farm just about long enough watching the other fellows go by, and when they decided to buy a car they determined to have the best that money could buy.

"'But can you afford a $16,000 automobile?' I asked.

"'I guess we can,' was his reply.

"Finally I asked him what his income was and he replied $3000.

"'You mean $3000 a year?' I asked with surprise.

"'No.'

"'Three thousand dollars a month?' I came back.

"'No,' he said.

"'Three thousand dollars a week?'

"'No, $3000 a day,' said the farmer.

"So you see you cannot always tell by appearances how good a prospect really is."

One of the most expensive automobiles sold at this year's New York Automobile Show was purchased by a Negro, Mr. Moskovics said. A salesman noticed him admiring a car, gave him courteous attention and closed the deal. It developed that the purchaser was the pastor of a Colored church in New York.

Selling at the Show

When Mr. Moskovics arrived in New York he found that four salesmen who were supposed to be on duty at Stutz' special showing in the lobby of the Hotel Commodore had failed to put in appearance, so Mr. Moskovics took personnal charge, and, in a few hours had signed orders for two cars, whose aggregated value exceeded $11,000. After that salesmen were eager to be in attendance at the exhibit.

"I had one salesman at New York tell me that the show was no place to sell automobiles, he said." Well, the other salesmen in the organization sold as high as 10, 15 or 20 cars during the show besides lining up as high as 200 live prospects. The man who told me that certainly demonstrated his point. He sold one car and listed 25 prospects as a result of his week's work. He isn't employed by us now.

"Get up original ideas—make contacts. That's what this business needs and you men are the ones who are going to develop them.

"What we need is some constructive education. How many of you know the engineering history of the industry? How many of you have studied the engineering trends of the past, present and future?" asked Mr. Moskovics, who declared that the trade publications of the automotive industry rank high above those of any other business, and offer to the men in the business the very best of educational facilities.

Evening Clothes Not for Salesmen

I certainly would not approve salesmen wearing evening clothes at an automobile show. There isn't one man in a thousand who knows how to wear them, and not one in five thousand who feels comfortable in them. You're not supposed to go there as a beau brummel. Do not try to hold yourself aloof from the public in either dress or language. Don't try to use big words if you don't know what they mean. Keep away from involved things, including clothes.—*From address of F. E. Moskovics to Detroit automobile salesmen.*

SHOWS SCORE NEW RECORDS

Attendance at Exhibits Reflects Public Interest

Makers Proceed Carefully But Prepare Their Forces For Active Season

NEW YORK, Jan. 26.—Although the production total of cars and trucks this month will be well above December, manufacturers are proceeding conservatively and are content to await developments of a definite character in the sales market, which are not expected until the weather improves and a majority of the local automobile shows have been held. Attendance records have been broken in several cities already and there is no doubt of the keenness of public interest in the new offerings.

The factories meanwhile are mustering their forces for the active selling season, which, by common agreement, will see probably the most intense period of competition in the history of the industry. New sales and service plans are getting under way and for the first time something definite appears to be under way for the aid of the dealers in merchandising used cars, which remain the most serious problem for the retail end.

That car prices have continued on a fairly stable basis is proving a helpful factor, as price cuts have been one of the worst adverse influences on the used car market. They tend to depreciate used car values and sometimes lead to increases in repossessions, as cars are only repossessed when the purchaser is unable to sell the vehicle for more than he has put into it.

The industry still looks for mergers in 1927, despite the difficulties that cropped up when preliminary moves toward consolidations were made last year.

Form Relay Motors Corp.

DETROIT, Jan. 22.—The Commerce Motor Truck Co., of Ypsilanti, Mich., and Service Motors, Inc., of Wabash, Ind., have been formally amalgamated through the formation of Relay Motors Corp. Besides manufacturing Commerce and Service trucks, the new corporation will also produce the relay axle at the Wabash plant.

Officers of the new corporation are: W. R. Bassick, chairman of the board; G. L. Gillam, president and general manager; M. A. Holmes, vice-president in charge of sales; Paul Abbott, vice-president, and A. K. Tabor, secretary and treasurer. Directors are: Paul Abbott, E. W. Bassick, W. R. Bassick, E. S. Evans, M. H. Furlaud, G. L. Gillam and M. A. Holmes.

Record Crowds at Windsor

WINDSOR, Ont., Jan. 23.—Automobile dealers of the "border cities" brought their automobile show to a close last night. From the interest displayed by record breaking crowds dealers predict that 1927 will see the best automobile business in the history of this section of Canada.

Air Spring Makers Merge

CLEVELAND, O., Jan. 22.—Merger of the Westinghouse Air Spring Co., of New Haven, makers of Westinghouse air springs, with the Cleveland Pneumatic Tool Co., Cleveland, O., makers of Gruss air springs, is announced by L. W. Grave, treasurer and general manager of the Cleveland company.

Both types of air springs will be built and marketed by the Cleveland company, the announcements says. The New Haven plant of Westinghouse will be moved to Cleveland. It is said that with the Cleveland company's large organization of sales and service stations the new arrangement will offer more complete service facilities for users of both Gruss and Westinghouse equipment, especially in view of plans to increase the Cleveland company's field service department. No change will be made in the designs of either type of spring, according to Mr. Graves.

A. E. A. Convention Trains

CHICAGO, Jan. 24.—The Automotive Equipment Association has announced the itineraries of two special trains that will carry delegates and guests to the twelfth annual summer convention of the association at Portland, Oregon, June 27 to July 2. The two trains will run from Chicago to Portland. One known as the Blue train will run over the C. B. & Q. and Great Northern lines by way of Glacier National Park, and the other known as the Red train will run over the C. B. & Q., Soo Line and Canadian Pacific by way of Banff. Both trains will arrive at Portland the evening of June 26.

It is announced that the round trip railroad fare from Chicago to Portland and return for this convention will be $90.30.

Snow Couldn't Stop Him!

You dealers and salesmen in the Sunny South, the Glorious Middle West, the Energetic East and the Golden Pacific Coast—

Read the story of how Ray LaRowe, in a snowbound town of 3,000 population in Minnesota, won a national sales contest by selling 96 cars in 50 days.

The story with pictures will be in next week's issue of MOTOR AGE, out Feb. 3.

Complete report of the Chicago National Automobile Show in the same issue.

Tom O. Duggan, N.S.P.A. Merchandising Director

New Association Executive Will Assist Jobbers in Solving Problems

DETROIT, Jan. 24.—Tom O. Duggan, of Los Angeles, has been appointed Merchandising Service Director of the National Standard Parts Association. Mr. Duggan has spent 18 years in the automotive industry, with long service in the replacement parts field. He comes to the N. S. P. A. from Chanslor & Lyon Co., Pacific coast accessory jobbers with whom he spent many years, and for whom he has been sales manager of the company's Los Angeles branch.

Mr. Duggan was in the air service during the world war, rejoining Chanslor & Lyon after the armistice and establishing a replacement parts division for their Los Angeles branch. In early days of the industry he had experience in racing, both as mechanic and driver, with Marmon and Stutz teams. With Pacific coast distributors he gained valuable experience in engineering and sales which was enriched with a connection later in the Hawaiian Islands as superintendent of a new car assembly department for Von Hamm-Young, large Hawaiian car distributors. Mr. Duggan is a member of the S. A. E.

His work with the N. S. P. A. will be to aid jobber members in market development and solving business problems, as well as organizing local groups of the N. S. P. A. such as the Chicago division, recently formed. His counselling will embrace all such matters, as window, shelf and counter display, overhead, salesmen's quotas, compensations, etc.

Re-elected to Directorate

DETROIT, Jan. 22.—Stockholders of the Continental Motors Corporation met in Richmond, Va., Thursday, and re-elected the following directors: R. W. Judson, W. R. Angell, W. A. Frederick, Roger Sherman, A. E. Green, James H. Ferry, E. W. Nivon, R. M. Sloane and B. F. Tobin, Jr. The corporation announced that Thomas M. Simpson, secretary, has been transferred from Detroit to the Muskegon offices.

New Line of Pistons

LOS ANGELES, Jan. 21.—W. B. Huber & Co., manufacturers of Jahns pistons, announces that a new line of Jahns Magnalite Pistons made of aluminum will be ready for distribution about February 15. This line is in addition to the grey iron pistons made by this company.

M.&A.M.A. Groups Will Confer at Palmer House

Special Meetings Arranged for Cooperatives in 1926 Campaigning

NEW YORK, Jan. 22.—The Motor and Accessory Manufacturers' Association will hold a series of group meetings for members only at the Palmer House during the Chicago show.

The plan, as outlined by Neal Adair, under whose department the work is conducted, will consist of meetings of groups of members who distribute products nationally through the wholesale trade and cooperated throughout 1926 in the work of the sales development department.

The service parts group will meet Wednesday, February 2, at 10 A. M. L. A. Safford of McQuay-Norris Mfg. Co. is chairman.

The shop equipment group will meet the same day at the same place, at 2 o'clock in the afternoon. R. W. Proctor of Black & Decker Mfg. Co. will be chairman.

The accessory group will meet Thursday, February 3, at 10 A. M. W. S. Isherwood of the A-C Spark Plug Co. will be chairman.

The various groups will review sales development in connection with the national shows and the study of distributing practices which have been made, and will plan the current year's activities.

December Sales Hold Own

INDIANAPOLIS, Jan. 22.—According to the tabulation of new car registrations for Indiana by the Indianapolis Auto Trade Association new car sales in that state during December, 1926, held just about even with sales of the preceding November but were about 17 per cent under the total for December, 1925. November, 1926, also was 8 per cent under November, 1925. On the basis of the association's figures it is considered that the final month of 1926 made a favorable showing especially in view of the loss for that month in the adjacent state of Illinois and losses by many other states. December's new car registrations were 3883 compared with 3860 for November.

Open Federal School Feb. 7

DETROIT, Jan. 24.—The Federal Motor Truck Co. will open a Federal sales school at the factory, offering 10-day intensified courses to Federal truck salesmen. The first class begins Feb. 7 and each group will be limited to 50 students.

The course is open to all members of the Federal sales organization, who may become students in the school by meeting certain qualifications and requirements.

Besides studying engines, bodies, and the chassis the students will take up manufacturing, finance, advertising, cost accounting and merchandising. The faculty will comprise the principal executives of the company, including President M. L. Pulcher. The school will be in charge of A. M. Pearson of the sales promotion department.

Mayor Opens Detroit Show

DETROIT, Jan. 23.—Mayor John W. Smith officially opened the Detroit twenty-sixth annual automobile show in Convention Hall last night.

The exhibit entirely fills the mammoth building and comprises a total of 32 lines of passenger cars, 13 makes of commercial vehicles, two airplanes, motor boats, accessories and shop equipment.

G. M. Employes Profit

DETROIT, Jan. 22.—General Motors Corp., is distributing $8,261,561 in cash and common stock among 8623 employes who are participants in the General Motors Savings and Investment Fund, Class of 1921. The employes will receive $1,527,845 in cash, this being their original payments into the savings fund plus interest compounded semi-annually at six per cent. In addition there will be distributed 42,686 shares of General Motors common having a market value of $6,733,716.

As an example of how the plan works, an individual who paid $300 into this class has his original investment returned, $113 in interest and in addition General Motors stock having a value of about $1775, or a profit of about $1900 on the $300 investment.

Put 1926 Production in U.S. at 4,260,425 Units

Commerce Department Credits Year with Gain of 85,539 Vehicles

WASHINGTON, Jan. 21.—Automobile production in the United States in 1926 totaled 4,260,425 cars and trucks, compared with 4,174,886 in 1925, according to the Department of Commerce. The 1926 production represents a gain of 85,539 units, compared with 1925.

The compilation shows that car production in 1926 was 3,765,048, compared with 3,696,490 in 1925. Truck production in 1926 in the U. S. was 494,377, compared with 478,396.

Total car production of U. S. factories, and their Canadian branches in 1926 was 3,929,535, compared with 3,835,801 in 1925. Total U. S. and Canadian truck production was 535,006 in 1926, compared with 500,470 in 1925.

The figures in the United States and Canada for 1926 and 1925 are based on reports from 163 manufacturers, 54 making passenger cars and 127 making trucks (18 making both cars and trucks).

Tracy Named Vice-President

PONTIAC, Jan. 22.—The election of W. R. Tracy as vice-president in charge of sales, of the Oakland Motor Car Co., has been announced by President A. R. Glancy. Mr. Tracy's election to the vice-presidency follows close upon his recent appointment as general sales manager.

Effective Dignity Reigned in the Staging of This Fine Automotive Exhibition

Another triumph for the industry and trade was scored when the annual Philadelphia show was held Jan. 15-22. Here is a sectional view which speaks for itself.

John Kelsey, President Of Wheel Company, Dies

Notable Business Success Follows Hard Work in Early Youth

DETROIT, Jan. 22.—John Kelsey. president of the Kelsey Wheel Co., died at his home Wednesday evening of stomach trouble. His life story tells of a boy who rose through hard work to business leadership.

Born in Detroit, March 15, 1866, John Kelsey left school when 11 to work for a paper firm for a dollar a week as a means of helping support a widowed mother and other children. Laboring at odd jobs and saving for six years at 18 he went into business with Albert V. McClure under the firm name of Kelsey, McClure & Co., manufacturing hardwood supplies. Meeting success he joined H. J. Herbert in 1902 in launching the Kelsey, Herbert Co., makers of ebony toilet articles. Then in 1906 he became interested in a spring automobile wheel.

In 1907, with Wm. Du Charme and six other Detroit associates he organized the Kelsey Wheel Co., capitalized at $300,000. By 1915 business growth made it necessary to increase the capitalization to $13,000,000. All wheels used by Ford at one time were made by Kelsey. Besides ownership of the Kelsey Wheel control he amassed a large personal fortune during his 40 years of business activities. Mr. Kelsey had the name of being very generous with gifts and aid of friends. Since 1900 he owned a third interest in the Detroit American League baseball team, and he was a lover of sports. In addition to helping organize and belonging to the Detroit Athletic Club Mr. Kelsey was a member of several other organizations. In 1922 he was married to Margaret Dalls. Besides his widow a son and daughter survive him. The funeral was held today.

Paige Offers Sales Course

DETROIT, Jan. 22.—A special correspondence course in salesmanship is being offered to Paige salesmen by the Paige-Detroit Motor Car Co. The course will consist of 15 lessons for which the salesman will pay an enrollment fee of $2.

Durant's Accessories Policy

NEW YORK, Jan. 22.—In a letter to E. V. Hennecke, president of the Automotive Equipment Association, Colin Campbell, vice-president of Durant Motors, Inc., states that it is not the intention of Durant Motors to handle automotive accessories through its parts department. Mr. Campbell wrote:

"We feel that the automotive jobber is best qualified to handle such standard accessories as may be required; furthermore, that the dealer is entitled to any profit which he may make in the sale of such accessories as a customer may desire placed on his car, and that this profit can best be secured by dealing with and purchasing through his regular automotive jobber."

Show Key and Drive Car

CHICAGO, Jan. 22.—Declaring it has been found after three years of experience that cars can be rented "100 per cent on an honor basis," the Hertz Driv-Ur-Self Stations, controlled by the Yellow Truck & Coach Mfg. Co., announces a new plan for identifying those eligible to use the Driv-Ur-Self cars. Under the new policy a registered key will be furnished any applicant whose name appears in the telephone book or who can furnish one reference in case the telephone book does not contain his name. To take out a car it is only necessary to show this key at the service station. This key bears the name of the person to whom it is issued, it is registered by the company and the company will offer a reward for its return if it is lost. No charge is made for the key. The new plan makes it unnecessary to fill out a blank form or go through other formalties in order to use one of the Driv-Ur-Self cars.

Will Name Committee

OSHKOSH, Wis., Jan. 22.—Stockholders and creditors of the Oshkosh Motor Truck Mfg. Co., Oshkosh, Wis., will meet Feb. 17, to choose a protective committee. A short time ago friendly receivership proceedings were instituted to facilitate a financial reorganization. W. G. Maxcy of Oshkosh was appointed receiver with authority to continue operations. Now, however, action has been taken to foreclose a trust deed to secure payment of certain bonds because the interest due July 1, 1926, has not been paid, nor have taxes assessed for 1925 been paid.

Milwaukee Show a Success

MILWAUKEE, Jan. 22.—Not only have all past attendance records been exceeded by the Milwaukee automobile show, but other evidence was developed by the exposition this week that has placed the Milwaukee and Wisconsin dealer trade in the most cheerful frame of mind in fully three months past. While there have been some years in the last seven when floor sales perhaps were more numerous than this year, no dissatisfaction is expressed by any exhibitor with the number of actual orders booked, and the substantial prospects enrolled, particularly by the dealers in the medium and higher priced classes, are said to be the largest at any show.

A new high record of a single day's attendance was set on Jan. 18, when 18,306 persons were admitted. The largest day in 1926 drew an attendance of 15,979. On the night of Jan. 18 hundreds were compelled to go away without even getting inside.

Canadian Ford Plans Big Production Increase

Company Sees an Excellent Outlook for Sales During 1927

DETROIT, Jan. 22.—W. R. Campbell, vice-president and treasurer of the Ford Motor Company of Canada, announces that his company intends to increase production 20 per cent during 1927.

During 1926 the Ford Motor Company of Canada enjoyed an increase in sales of 38 per cent over 1925, Mr. Campbell said, and estimates for 1927 are based on a careful analysis of the Canadian market.

Industrial activity is great in Ontario and Quebec and a general improvement in conditions is obvious, he declared. Canada's foreign trade, last year, aggregated $2,309,000,000 and showed a favorable trade balance of $300,000,000.

The automobile industry is now practically the largest in the Dominion and Canada today probably stands second among the countries as a producer of motor cars. Mr. Campbell expressed the belief that 1927 will see registrations exceed the million mark. They were 850,000 in 1926.

Figures which he presented indicate the unusual growth of the automobile business in certain of the Canadian provinces. The figures, which show the gain in Ford business in 1926 over 1925 follow: Maritimes, 19 per cent; Quebec, 7 per cent; Ontario, 31 per cent; Manitoba, 41 per cent; Saskatchewan, 85 per cent; Alberta, 74 per cent, and British Columbia, 31 per cent, or an average of 38 per cent.

A.E.A. Soon Moves

CHICAGO, Jan. 22.—The Automotive Equipment Association will move its executive offices about February 15, from the City Hall Square Building to the new Pure Oil Building at 35 E. Wacker Drive. In the new quarters the association will occupy the entire thirty-first floor and will have sufficient room to house the new Market Development Department that is being inaugurated.

Goldie Leaves Ruggles

SAGINAW, Mich., Jan. 22.—R. J. Goldie has resigned as general manager of the Ruggles Motor Truck company, Saginaw, Mich., it is announced. Mr. Goldie will announce his future plans shortly.

D.B. Make Output Record

DETROIT, Jan. 22.—Production of Dodge Brothers, Inc., for 1926 totaled 331,764 passenger cars and trucks, which is a new record for the company. The 1926 output exceeded 1925 production by 27.6 per cent when 259,967 units were built.

Where Buffalo Tradesmen Held That City's Silver Anniversary Automobile Show

Here is a good view of the Silver Anniversary Automobile Show held at the 174th Infantry Armory, Buffalo, Jan. 15-22. It was Buffalo's 25th exhibit which, according to reports, was a signal success.

NEW
Automotive Literature

THE BUSINESS OF SERVICE. This is a textbook for the dealer who wants to improve his service department. It is published by the Oakland Motor Car Co., Pontiac, Mich., for Oakland and Pontiac dealers. The first part deals with the organization of the service department, taking up such questions as the value of maintenance and operation, profits from service and the necessity of a good service organization. The second part takes up flat rates, service sales, parts management and turnover, shop equipment and tools, selection and training of personnel, and other related subjects. The illustrations include diagrams of shop layouts and sample forms and letters to be used in the business.

HANDBOOK OF THE GERMAN AUTOMOBILE INDUSTRY. This is a manual prepared by the Association of the German Automobile Industry and lists all German and Austrian motor vehicles with brief specifications, prices and illustrations. Published by Deutsche Verlagswerke Strauss, Vetter & Co., Berline C2, Breite Str. 8-9, Germany. Price including postage, 3 shillings, 6 pence.

JAHNS PISTON CATALOG. The latest catalog published by W. B. Huber & Co. of Los Angeles, Cal., and St. Louis, Mo., contains complete specifications of Jahns All Quality Pistons for practically all makes and models of automobiles from the oldest to the newest. It also gives information about fitting pistons and pins. The price list that goes with the catalog was revised December 1, 1926. The catalog will be sent to dealers upon request to either the Los Angeles or the St. Louis office.

MOTOR CAR MECHANISM, MANAGEMENT AND OVERHAULING. The second edition, revised and enlarged, of this book by Edward C. M. Sheperd is just off the press. The book takes up the construction and operation of the automobile engine in an elementary way and gradually leads into some of the details of mechanical adjustment and servicing. Photographs and drawings are used to fully illustrate it. As the book is published in England most of the text matter refers to cars of British make. Published by Crosby Lockwood & Son, Stationers' Hall Court, Ludgate Hill, London E.C.4 Price 2 shillings 6 pence.

Sell Cars at Newark Show

NEWARK, N. J., Jan. 24.—Despite the fact that the 20th annual Newark automobile show last week opened "in a blaze of snowflakes," as Manager Claude E. Holgate expressed it, there was an exceptionally heavy attendance and a large number of retail sales made on the opening night. Mr. Holgate said that the Monday night attendance was 40 per cent above the Monday night crowd of last year and the show was well patronized throughout the week. While the first sale made at the show was that of a $4500 car, the greatest number of sales were in the $1000 to $2000 price range.

There were 38 makes of cars, each with a number of models, represented, and about 40 accessory exhibits.

Buffalo Show Sets New Record for Floor Sales

Silver Anniversary Event Displays 300 Cars and 30 Trucks

BUFFALO, Jan. 24.—Buffalo's 25th annual automobile show, Jan. 15-22, its Silver Anniversary Show, produced a new record in sales and prospects listed. The show was under direction of the Buffalo Automobile Dealers' Association. Carlton C. Proctor, executive secretary of that organization, being manager. The ground floor of the armory was given over to passenger cars and trucks, 300 of the former and 30 trucks being displayed. Forty-three makes of passenger cars and ten truck manufacturers were represented. The show had a shop equipment exhibit which attracted much attention from owners and employes of establishments servicing cars and from car owners. It also had a large accessories department.

A souvenir program contained an interesting history of the annual show from the first one held in 1903 down to the present. It cites that among the exhibitors at the 1927 show are only two who displayed cars at the first show and who have exhibited at every show since. They are John J. Gibson and Gustave H. Poppenberg.

The history of the phenomenal growth of the atuomobile industry was reviewed at a dinner given to the past presidents of the local association. The dinner took place the evening before the show opened. The toastmasters were Carlton C. Proctor, present secretary of the dealers' organization, and Edward C. Bull, its president. Each of the former presidents spoke.

To Talk Waste Reduction

WASHINGTON, Jan. 22.—Reduction of avoidable waste in the automotive industry through elimination of unnecessary sizes and varieties of spark plugs, pistons, piston ring oversizes, brake lining and roller bearings will be considered at a general conference of manufacturers, distributors and users in Detroit Feb. 2-3, the Department of Commerce announces.

The meeting will be held under the joint auspices of the National Committee on Metals Utilization and the Division of Simplified Practice, of the Commerce department.

Dealer a Candidate

CHICAGO, Jan. 22.—Edward R. Litsinger, president of the Edward R. Litsinger Motor Company, Chicago Ford dealers, is a candidate for Chicago's republican mayoralty nomination. Mr. Litsinger, whose company is a member of the Chicago Automobile Trade Association, has for years been identified with local trade activities.

Grant Discusses Selling Before S. A. E. Members

More Than 1000 Present at Technical Organization's Annual Dinner

NEW YORK, Jan. 22.—The way to sell motor cars, R. H. Grant, general sales manager, Chevrolet Motor Co., said at the Society of Automotive Engineers' annual New York show dinner, is to get the public to talk favorably about your product.

Over 1,000 members and guests were present at the banquet at which Mr. Grant was the principal speaker and at which R. H. Hunt, head of the electrical division, General Motors Research Corp., made his first talk as president of the society.

Five things are important in determining how the public is going to talk about your product, Mr. Grant said. These are: The design of the car, the faithfulness with which the producer carries out his production program, the way in which the product is advertised, the selling and service methods used, and the way in which the management reflects its ideas out to the public. Mr. Grant said that if he had $5,000,000 to spend in putting over a new automobile he would expect to spend $2,000,000 in advertising it before he would expect to get public reaction—that is, to get the car talked about in a general way. The use of more cars per family is, to Mr. Grant's mind, the most obvious way in which the automotive industry will expand its market in the next year or so.

Mr. Hunt emphasized the necessity for the engineer to have a broad viewpoint and a general knowledge of all phases of the industry.

T. J. Litle, Jr., chief engineer, Marmon Motor Car Co., outlined briefly the history of transportation in his remarks as retiring president of the society.

E. P. Warner, assistant secretary of the navy in charge of aviation, presided as toastmaster.

Autocar President Dies

TRENTON, N. J., Jan. 22.—L. L. Woodward, president of the Autocar Co., of Ardmore, Pa., died at his home here of pneumonia. He was 48 years old. Previous to his election as president of the Autocar Co. last April he had been president since 1915 of Fitz Gibbon & Crisp, Inc., of Trenton, commercial car body makers.

Change Company Name

DETROIT, Jan. 22.—The American Bushings Corporation of Port Huron, Mich., has changed its name to Pressed Metals of America, Inc. The change was deemed advisable in view of an expansion program consisting of the production of new products other than bushings. No change has been made in organization of personnel.

EVENTS AND HIGH SPOTS OF THE NATIONAL SHOW IN CHICAGO

National Show at Chicago
Jan. 29-Feb. 5
Coliseum

Opens Saturday, Jan. 29.... 2:00 P.M.

Show not open Sunday, Jan. 30.

Opens Jan. 31-Feb. 5.....10:00 A.M.

Shop Equipment Section open daily to Trade exclusively from ..... 10:00 A.M. to 3:00 P.M.

Trade Days—Monday, Jan. 31 and Tuesday, Feb. 1. Show open to Trade exclusively between ..... 10:00 A.M. to 1:00 P.M.

THURSDAY, JAN. 27

Chicago Automobile Trade Association, Pre-Show Meeting and Banquet, Congress Hotel ..... 6:30 P.M.

SATURDAY, JAN. 29

Annual Chicago Salon, continuing through Feb. 5, Drake Hotel.

Elcar Motor Company, first of series of daily Sales Meetings, Palmer House .....Morning

Hupp Motor Car Corporation, first of daily lunch eons, Blackstone Hotel.. 1:00 P.M.

Rickenbacker Motor Company, first of daily Dealer Meetings, Blackstone Hotel .....Morning

MONDAY, JAN. 31

National Automobile Dealers Association, Annual Meeting Board of Directors, La Salle Hotel..10:00 A.M.

TUESDAY, FEB. 1

Moon Motor Car Company, Annual Moon Banquet, Congress Hotel ..... 1:00 P.M.

National Automobile Dealers Association, Annual Convention, La Salle Hotel, opens..... 1:30 P.M.

Oakland Motor Car Company, Luncheon, Palmer House .....Noon

Packard Motor Car Company, All-Day Zone Meeting for Dealers and Distributors, Blackstone Hotel.

The F. B. Sterns Company, Dealers Luncheon, Drake Hotel..... 1:00 P.M.

WEDNESDAY, FEB. 2

Auburn Automobile Company, Luncheon and Meeting, Blackstone Hotel .....Noon

Franklin Automobile Company, Dealer Luncheon, Drake Hotel.. 1:00 P.M.

Motor and Accessory Manufacturers Association, Service Parts Group Meeting, Palmer House..10:00 A.M.

Shop Equipment Group Meeting, Palmer House 2:00 P.M.

National Automobile Dealers Association, Convention, La Salle Hotel. **Starts .....10:00 A.M.**

N. A. D. A. Banquet and **Trade Frolic, La Salle Hotel, Grand Ball Room 6:30 P.M.**

Olds Motor Works, Dealers' Business Meeting, at Chicago Branch..... 2:00 P.M.

Olds Western Dealers' **Dinner, Congress Hotel..Evening**

Packard Motor Car Company, All-Day Zone Meeting for Dealers and Distributors, Blackstone Hotel.

Velie Motors Corporation, Luncheon, Congress Hotel ..... 1:00 P.M.

THURSDAY, FEB. 3

Motor and Accessory Manufacturers Association, Accessory Group Meeting, Palmer House.....10:00 A.M.

Nash Sales Company, Chicago. Luncheon for dealers of Indiana, Iowa and Illinois, Congress Hotel .....Noon

National Automobile Chamber of Commerce, National Automobile Dealers Association and Motor and Accessory Manufacturers Association—Joint Service and Shop Equipment Program, La Salle Hotel....10:00 A.M.

National Association of Automobile Show and Association Managers, Meeting, Drake Hotel..... 1:00 P.M.

Paige-Detroit Motor Car Company, Luncheon, Blackstone Hotel .....Noon

Studebaker Corporation, Dealers' Banquet, Congress Hotel ..... 6:30 P.M.

FRIDAY, FEB. 4

Chevrolet Motor Company, Dealers' Meeting, Erlanger theater ..... 2:00 P.M.

Annual Chevrolet Banquet, Palmer House..... 7:00 P.M.

Champion Completes Building

TOLEDO, O., Jan. 22.—Completion of a six story building adjacent to its main manufacturing plant here, which duplicates that structure, is announced by the Champion Spark Plug Co. This unit enlarges the company's annual productive capacity to more than 50,000,000 spark plugs and places Champion's expenditures for additional plant and manufacturing facilities during 1925 and 1926 in excess of $500,000. Coincident with the construction of this newest unit, changes were made by the Champion Porcelain Co. of Detroit, which makes all Champion cores, sufficient to permit an output in excess of 1,000,000 cores a week.

Hassler Company Elects

INDIANAPOLIS, Ind., Jan. 22.—New officers of Hassler Mfg. Co., Inc., are: President, Guy Lemmon; vice-president and treasurer, Arthur H. Shaft; secretary, Edwin Gibbs; assistant secretary, Fred Asperger; assistant treasurer, Velma Henry; sales manager, J. E. Casey. The company plans a sales convention for the near future for dealers and salesmen from all parts of the country.

Represents Nash

WILMINGTON, Del., Jan. 22.—The Keil Motor Co., Eleventh and Tatnall streets, has assumed the distribution of the Nash cars for Wilmington.

Continental Has Plan For Rebuilding Engines

Complete Overhaul Will Be Made at Factories on Fixed Price Basis

DETROIT, Jan. 22.—As a means of rendering more satisfactory service on Continental engines, the Continental Motors Corporation has devised a plan whereby engines requiring major overhaul operations may be shipped back to the factory in Detroit, or Muskegon, where they will be completely rebuilt, like new, for a fixed charge.

Flat rate charges covering all phases of work on the various Continental engines are contained in a plan outlined in a book which Continental is making available to any garage operator, upon application.

Provisions are made in pricing to properly compensate each different class of representatives. As an example, a garage man or independent service station sending Continental a repair job, pays less for it than the individual customer. The vehicle manufacturer who handles his customer's work through the Continental shops will also receive discounts which will permit profitable handling of such repair work as may be necessary through these channels.

It is claimed that prices charged for complete overhauling the different types and models are in most cases the same or perhaps slightly under those which would be charged by local service stations. Another item, however, is crating and freight, the cost of which is fully detailed in the instruction book.

When the engine is received at the factory it is completely dismantled, all parts inspected and necessary new units added to make it as good as a new engine. It is put through a series of tests and is finally approved like a new engine, and, is given a coat of spray enamel before being returned.

Frisco Ready for Show

SAN FRANCISCO, Cal., Jan. 22.—All space has been sold for the eleventh annual Pacific Automobile Show, which opens in the Municipal Auditorium here Jan. 29. It closes Feb. 5.

Complete displays of the new models as shown in the New York show, are to be shipped here for installation in the coming exhibit. Creatore's band will form the musical attraction, and the music of this organization will be broadcast from a radio station, with an announcer telling briefly of the automobile show just before each selection is put on the air. This method of advertising the show is expected to draw larger crowds than ever have attended a San Francisco automobile exhibit.

The show is being held under the auspices of the San Francisco Motor Car Dealers' Association.

Promoted by Continental Motors Corporation

D. A. Andrews

D. A. Andrews has been appointed assistant sales manager of the Continental Motors Corp., Detroit. For the past 15 years he has been associated with Continental as service manager, a position he will continue to retain in an advisory capacity, in addition to his new duties.

M. A. T. A. to Meet

DETROIT, Jan. 22.—An elaborate program has been arranged for the annual meeting of the Michigan Automotive Trade Association in the Book-Cadillac hotel, Wednesday, Jan. 26.

The first business session will be held at 10:30 a. m. followed by luncheon. At the educational session which will be held in the afternoon, Howard J. Wisehaupt, of Cleveland, sales engineer, will discuss "Sales Tactics." B. G. Koether, director of the sales section of General Motors Corp., will follow with a discussion of the Windsor Plan for merchandising used cars. M. D. Graham, of the Automotive Equipment Association, will be the concluding speaker. His subject will be "Merchandising Opportunities."

At the seventh annual banquet, which will be held in the evening, Charles F. Kettering, vice president of General Motors Corp., will be the speaker.

Increased Overseas Sales

DETROIT, Jan. 22.—Sales by overseas dealers of General Motors Corp. for the first nine months of 1926 totaled 86,596 cars compared with 67,760 last year, an increase of about 28 per cent, says a statement by Alfred P. Sloan, Jr., president. The figures apply to sales of Chevrolet, Pontiac, Oldsmobile, Oakland, Buick and Cadillac in all countries except the United States and Canada.

Fisher Brothers Plan $35,000,000 Building

Start Work in Spring on First Unit of Great Structural Project

DETROIT, Jan. 22.—The six Fisher brothers who have become a power in the automotive world through their remarkable rise as manufacturers of automobile bodies announced that they will erect a $35,000,000 office building on Grand Boulevard, opposite General Motors building. It is believed that the development will be the largest of its kind ever undertaken in the United States.

The site of the project comprises 332,000 square feet or slightly more than seven acres. It has a frontage on the boulevard and on Lathrop avenue of 820 feet and 405 feet on Second boulevard and Third avenue. The main body of the structure, which will be known as the Fisher building, will cover the entire block and will be 10 stories in height, with a 25-story tower in the center.

According to present plans construction will require several years. The building will be built in three units and work on the first section will be started in the Spring. It will be 10 stories high and will include the 25-story tower and will be finished in 1928. Features of the structure will be a garage for 1,000 automobiles and a theatre with 4,000 seats besides 50 stores of three floors and a professional unit especially fitted for doctors and dentists.

Birmingham to Have Show

BIRMINGHAM, Ala., Jan. 22.—Members of the Birmingham Motor Trades Association will co-operate with the Birmingham Age-Herald to stage an automobile show at the Birmingham Municipal Auditorium on Feb. 10-12.

The dealers declare the show will be the largest Birmingham has ever had. All of the latest models will be exhibited and there will be music and special entertainment features.

Offers Rebuilt Fords

DETROIT, Jan. 22.—In a large display advertisement appearing in the Flint Daily Journal, the Otto P. Graff Motor Sales, leading Ford dealer of Flint, features rebuilt cars.

"Ford Rebuilds Used Cars," reads large type across the top of the advertisement, and it continues: "The first time an automobile manufacturer has rebuilt and guaranteed cars the same as new, in fact, these cars are just what the Ford Motor Co. says—REBUILT, looks like new, runs like new, guaranteed the same as new. A new car at a used car price." In conclusion, it reads: "We invite you to call at our salesroom and endeavor to distinguish them from new cars."

24 Exhibitors Are to Participate at Denver

Junked Cars, "Drivers" Aflame, Will Be Driven Off Mountain As "Ad"

DENVER, Colo., Jan. 22.—The Denver Automobile Dealers' Association is rushing preparations for the Annual Auto Show to be held in Municipal Auditorium Feb. 14-19, inclusive. This year there will be 24 exhibitors, and 60 models shown. The Alexander Film Co. will exhibit an airplane of its own manufacture, this being the first time an airplane has been displayed at a Denver show. Tom Braden, secretary of the association, is show manager, and H. M. Allison, Allison Motors, is chairman of the show committee.

A novel advertising stunt is planned for Sunday, Feb. 13, the day preceding the opening. Each dealer is contributing three junked cars. These will be equipped with dummy drivers, filled with highly inflammable material, lighted, and driven off Castle Mountain, near Golden. Pathe's Weekly will film the stunt, under the caption "How they handle the used car problem in the Rocky Mountains." Miss America, from Oklahoma, will be a guest of honor at the show.

Show for Spokane

SPOKANE, Wash., Jan. 22.—The dealers' division of the Washington Automotive Trade Association for Eastern Washington will hold an automobile show in the state armory at Spokane, February 16, 17, 18 and 19, Walter Evans, president of the dealers' group, has announced. This will be the first time the armory has been made available by the state for an automobile show or similar event and it will for the first time give eastern Washington residents an opportunity to see the cars of all makes represented here assembled in one room.

Hudson Dividend

DETROIT, Jan. 22.—The Hudson Motor Car Company directors Thursday declared the regular dividend of 87½ cents a share on the outstanding capital stock. This dividend is payable April 1 to stockholders of record March 15.

Patterson Has New Berth

GENEVA, Ill., Jan. 22.—C. M. Burgess, sales manager of the Burgess-Norton-Dall-Keyston selling combination, announces the appoint of W. D. Patterson to represent his organization in Ohio, Michigan, Indiana and portions of adjoining states. Mr. Patterson, one of the organizers of the National Standard Parts Association and founder of Patterson Parts, Inc., which operates a chain of parts stores on the Pacific coast, has been recently on specialized work in the trade publication field.

Bellinger Named President

SPOKANE, Wash., Jan. 22.—L. G. Bellinger, of Bellinger-Burrows, Oakland-Pontiac dealers here, has been elected president of the eastern division of the Washington Automotive Trade Association. He succeeds James Whitelaw of the Wells Chevrolet Company.

O. M. Fahey of Gill & Fahey, electrical equipment and accessories, is the new vice-president. New directors are as follows: Lee Olney of Stewart Warner Products Service Station; H. J. Patton of Spokane Independent Garage, Inc.; Paul R. Ruder of Ruder Fender & Body Works; Charles H. Fancher, Jr., of Fancher Tire company; Joseph Stenstrom of Blackwell Motor company.

Show Company Charters

ZANESVILLE, O., Jan. 22.—The Zanesville Auto Show Co. has been chartered with a capital of $12,000 to operate automobile shows and exhibits in Zanesville. Included among the incorporators are leading dealers of the city. They are E. R. Crawmer, LeRoy D. Shammon, A. D. Gorrell, L. E. Baughman and Charles N. Harvey.

Making Foreign Trade Study for Nash

C. C. Devore

C. C. Devore, who has specialized in foreign market surveys for many years, has started for Portugal on a tour of foreign countries for Nash Motors Company. He will gather information concerning various angles of foreign conditions and automobile marketing.

887 Cleveland Plants In Automotive Family

Survey Shows an Annual Value of Vehicles and Parts of $250,000,000

CLEVELAND, Jan. 22.—According to a survey recently completed by the Cleveland Automobile Manufacturers and Dealers Association the value of Cleveland's motor vehicles and parts annually is $250,000,000.

The survey also shows that there are 887 factories in Cleveland devoting all or part of their time to production of motor cars and parts.

These plants employ 22,587 workmen who participate in a payroll of $36,681,848 annually. Materials bought by these plants cost $141,682,048 a year.

Olds President Optimistic

BUFFALO, Jan. 22.—An optimistic outlook for 1927 in the automobile industry was expressed by I. J. Reuter, president and general manager of Olds Motor Works, who spoke before a gathering of Oldsmobile salesmen, managers and dealers of the Western New York and Northern Pennsylvania district at Hotel Statler. Mr. Reuter mentioned that the Oldsmobile is one of the few automobiles which exhibited in Buffalo's first automobile show 25 years ago, and is exhibiting today.

A talk was delivered by D. D. Eddins, vice-president and general sales manager of the company. Others at the speakers' table included: T. H. Stambaugh, service promotion manager; R. M. Hatfield, parts division manager; J. T. Collins, sales analysis department; Don Prentiss, sales promotion manager. All are from the company offices in Lansing, Mich.

C. C. Lee, sales manager of the Buffalo branch, presided. Conferences were held Wednesday afternoon before the dinner.

Chevrolet Sales Conference

WASHINGTON, Jan. 22.—The annual sales conference of the Chevrolet dealers of the middle Atlantic states held here was attended by 511 dealers from the states of Maryland, Virginia, West Virginia, Pennsylvania and the District of Columbia.

Various representatives of the Chevrolet Company were in attendance and spoke. These included: R. H. Grant, vice-president and general sales manager, who presided; C. E. Dawson, assistant general sales manager, in charge of the Atlantic coast district; Harry Horton, of the Tarrytown region, and H. B. Hatch, manager of the local zone.

Dealers predicted a banner year. The three day convention closed with a banquet at the Mayflower hotel.

Coming Motor Events

Automobile Shows

Akron, O. ..... Feb. 5-12
Goodrich Bldg.

Albany, N. Y. ..... Feb. 26-March 5
State Armory

Allentown, Pa. ..... Feb. 28-March 5
Manhattan Auditorium

Bethlehem, Pa. ..... Feb. 19-26
Colosseum

Birmingham, Ala. ..... Feb. 10-12
Municipal Auditorium

*Boston, Mass. ..... March 5-12
Mechanics Bldg.

Camden, N. J. ..... Feb. 7-12
Convention Hall

Casper, Wyoming ..... Feb. 21-24

Chattanooga, Tenn. ..... Feb. 14-19
Memorial Auditorium

Chicago ..... Jan. 29-Feb. 5
Annual Salon, Hotel Drake

*Chicago ..... Jan. 29-Feb. 5
National Show, Coliseum

Cumberland, Md. ..... Jan. 31-Feb. 5
Armory

Davenport, Iowa ..... Feb. 7-12

Deadwood, S. D. ..... Feb. 21-26
Auditorium

Denver, Colo. ..... Feb. 14-19
Auditorium

Des Moines ..... Feb. 14-19
Coliseum

Fort Wayne, Ind. ..... Feb. 14-19
Shrine Auditorium

Fort Worth, Texas ..... March 5-12

Greenville, S. C. ..... Feb. 17-19
Textile Hall

Harrisburg, Pa. ..... Jan. 29-Feb. 5
Emerson Brantingham Bldg.

Hartford, Conn. ..... Feb. 19-26
State Armory

Huntington, W. Va. ..... Feb. 7-12
Vanity Fair Bldg.

Indianapolis ..... Feb. 14-19
Auto Show Bldg.

Jersey City, N. J. ..... Jan. 24-29
Fourth Regiment Armory

*Kansas City, Mo. ..... Feb. 12-19
American Royal Building

Lancaster, Pa. ..... Feb. 1-5
Arcade Garage

Lansing, Mich. ..... Feb. 7-12
Auto Body Co. Bldg.

Los Angeles ..... Feb. 12-19
Annual Salon, Hotel Biltmore

Los Angeles ..... Feb. 26-March 8
Washington Park, in four tents

Louisville, Ky. ..... Feb. 14-19
Jefferson County Armory

*Muskegon, Mich. ..... Feb. 15-19
Armory

Omaha, Neb. ..... Feb. 21-26
Twenty-second Annual Automobile Show, City Auditorium

Ottawa, Can. ..... Feb. 7-12
Exhibition Grounds

Paterson, N. J. ..... Jan. 31-Feb. 5
Armory

Peoria, Ill. ..... Feb. 14-19
Armory

Pittsburgh ..... Feb. 19-26
Motor Square Garden

Portland, Me. ..... Jan. 31-Feb. 5
Exposition Bldg.

Providence, R. I. ..... Feb. 5-12
Cranston Street Armory

Quebec, Can. ..... March 1-8
Drill Hall

Reading, Pa. ..... Feb. 5-12
Zimmerman Leahy Garage

Rocky Mount, N. C. ..... April 4-8
Tobacco Warehouse

Saginaw, Mich. ..... March 9-12

San Bernardino, Cal. ..... Feb. 17-27
National Orange Show Bldg.

San Francisco ..... Jan. 29-Feb. 5
Exposition Auditorium

Schenectady, N. Y. ..... Feb. 21-27
State Armory

Sheboygan, Wis. ..... Feb. 14-20
New Eagles Auditorium

Sioux City, Iowa ..... March 3-6
Auditorium

*Sioux Falls, S. D. ..... March 2-5

Spokane, Wash. ..... Feb. 16-19
State Armory

Springfield, Ill. ..... Feb. 9-12
State Arsenal

Springfield, Mass. ..... Feb. 28-March 5
Municipal Auditorium

*St. Louis, Mo. ..... Feb. 21-26
Union Market Bldg.

St. Paul, Minn. ..... Feb. 5-12
Twin Cities Show

Syracuse ..... Feb. 7-12
State Armory

Toledo ..... Feb. 7-12
Civic Center Garage

Trenton, N. J. ..... Feb. 16-19
Armory

Twin Falls, Idaho ..... Feb. 17-19
Southern Idaho Automobile Show

Washington, D. C. ..... Jan. 29-Feb. 5

Worcester, Mass. ..... Feb. 10-12

Wichita, Kans. ..... Feb. 22-25
Exposition Bldg.

Wilkes-Barre, Pa. ..... Jan. 31-Feb. 5
Matheson Exposition Bldg.

Races

A. A. A.

Altoona, Pa. ..... June 11

Altoona, Pa. ..... Sept. 5

Atlantic City ..... April 30

Atlantic City ..... Sept. 24

Charlotte, N. C. ..... May 9

Charlotte, N. C. ..... Nov. 11

Detroit ..... Sept. 10

Fresno, Cal. ..... April 21

Indianapolis ..... May 30

Los Angeles ..... Feb. 22

Los Angeles ..... April 10

Los Angeles ..... Nov. 27

Salem, N. H. ..... June 25

Salem, N. H. ..... Oct. 12

Syracuse, N. Y. ..... Aug. 27 or Sept. 3

Conventions

Automotive Service Association of New York, banquet, Hotel Astor. ..... Feb. 17

North Carolina Automotive Trades Association, Asheville, N. C. ..... March 14-15

S. A. E.

French Lick Spring, Ind., May 25-28—Summer Meeting.

*Will have special shop equipment exhibit.

COMING FEATURE ISSUES OF CHILTON CLASS JOURNAL PUBLICATIONS

February 19—Automotive Industries—Ninth Annual Statistical Issue

Slogan Contest Winners

DETROIT, Jan. 22.—The Paige-Detroit Motor Car Co. has announced the winner in its slogan contest held recently, in which 402,000 entries participated. The winners who submited slogans considered the most meritorious are:

First prize $10,000, to J. Luther McFarland, Cairo, W. Va.

Second prize, a four-door sedan, to Mrs. Walter F. Halleck, Newbern, N. C.

Third prize, four-door sedan, to F. A. Dragoun, Peoria, Ill.

Mr. McFarland's slogan is "Built to win—without, within." Mrs. Halleck's slogan was "Satisfaction mounts with every mile" and Mr. Dragoun's contribution was "Commands respect on any road."

Special Sales Training

SOUTH BEND, Ind., Jan. 22.—The Research Bureau for Retail Training of the University of Pittsburgh has been retained by the Studebaker Corporation of America for the year 1927, according to an announcement by the factory in South Bend. Dr. James H. Greene, director of the bureau, and his staff will co-operate with Studebaker's training department in the development of retail salesmen for Studebaker dealers.

The training program will be based upon a scientific study of company policies, history and organization, values, materials and processes, selling difficulties and their solutions, distribution of time and duties of salesmen, forms and procedures and technique of training on the job.

Morten Gets Star Contract

DALLAS, Tex., Jan. 22.—The Morten Motor Company, Peerless dealer here, has taken over distribution and retail sales of Star. H. B. Davis has been made sales manager for both the Peerless and Star lines. J. T. Tidwell is general manager of the company and E. W. Morten, president. The company will supervise the sales of the Star lines in some forty counties around Dallas.

American Gasoline

For other chassis which are recommended and adapted for Bus use.

MAKE AND MODEL	GENERAL							ENGINE							ELECTRICAL SYSTEM					GOVERNOR		TRANS	
						Tires Type and Sizes						Fuel System			Ignition System			Battery				Clutch	
	Passenger Rating	Price—Chassis	Standard Wheelbase (Ins.)	Tread, Front and Rear (Ins.)	Chassis Weight (Lbs.)	Front (Ins.)	Rear (Ins.)	Make and Model	Number of Cylinders, Bore and Stroke (Ins.)	Rated Horse Power (N.A.C.C.)	Valve Arrangement	Oiling System	Carbueter Make	Fuel Feed	Make	Current Source	Generator and Starter Make	Make	Voltage and Amp. Hour Capacity	Type	Maximum Governed Speed (M.P.H.)	Make	Type
Ace	C 30	$4800	204	70 -80½	6500	S-36x6	S-36x6d	Cont	7T 6-4½x5¼	40.8	L	Fl Pr	Zen	V	Eis	M	RBos	USL	12-110	††	††	B-L	MDD
A C.F.	508 31-60		230	70⅝-78		P-36x8	P-36x8d	HaS	6-4¼x5½	43.3	Io	Pr Ck	Zen	V	Del	B	Del	Exi	12-115	Ce		Own	MDD
A.C.F.**	519 31-60		230	71¾-78	11500	P-36x8	P-36x8d	HaS	6-4¼x5½	43.3	Io	Pr Ck	Zen	V	Del	B	Del	Exi	12-115	Ce		Own	MDD
Acme	116 16	§	180	58½-72⅛	5200	P-32x6	P-32x6d	Cont	6B 6-3⅜x5	33.7	L	Pr Ck	Zen	V	ABos	BM	ABos	Wil	6-111	Ce	40	B-L	MDD
Acme	118-121 18-21	§	205	58½-72⅝	6000°	P-32x6	P-32x6d	Cont	7T 6-4½x5¼	40.8	L	Fl Pr	Zen	V	ABos	B	ABos	Wil	6-111	Ce	40	B-L	MDD
Bridgeport	HB 29	§	224		6500	P-34x7	P-34x7d	Buda	BUS 6-4 x5⅛	38.4	L	Fl Pr	Zen	V	Eis	M	L-N	Wil	12-130		45	B-L	MDD
Brockway	EB 20	§	153	56 -58	3850	P-32x6	P-32x6	Wisc	SU 4-4 x5	25.6	I	Pr Cs	Zen	V	Eis	M	L-N	Exi	12-220	N P	N-P	B-L	MDD
Brockway	EB4 20	§	153	56 -58	3900	P-30x5	P-30x5d	Wisc	Y 6-3⅜x5	27.3	I	Pr Cs	Zen	V	Eis	M	L-N	Exi	12-220	N P	N P	B-L	MDD
Brockway	H 22	§	200	60 -66	4975	P-32x6	P-32x6d	Wisc	HB 6-3⅜x5	33.7	L	Pr Cs	Zen	V	Eis	M	L-N	Exi	12-220	N P	N P	B-L	MDD
Brockway	J1-2 30	§	221°	66½-77⅜	7680	P-34x7	P-34x7d	Wisc	H 6-4 x5	38.2	I	Pr Cs	Zen	V	Eis	M	L-N	Exi	12-220	Opt	40	B-L	MDD
Clinton	65B 30	§	184	58½-58½	5925	P-32x6	P-32x6	Wauk	CU 4-4⅜x5¼	30.6	L	Pr Cs	Zen	V	Opt	M	ABos	Pre	6-150	Ce	††	B-L	MDD
Clinton	65BS 35	§	220	68 -76¾	6600	P-36x6	P-36x6	Wauk	6Q 6-4x5¾	38.4	L	Pr Cs	Zen	V	L-N	M	L-N	Pre	12-210	Ce	††	B-L	MDD
Commerce	65 34	§§	242	68 -75¾	8220	P-36x6	P-36x6d	Cont	14H 6-4½x5¾	48.6	L	Fl Pr	Zen	V	ABos	M	L-N	Wil	12-135	Opt	Opt	B-L	MDD
Commerce	60 25		229			P-36x6	P-36x6d	Cont	6B 6-3⅜x5	33.7	L	Pr Cs	Zen	V	ABos	M	ABos	Wil	6-153		35	B-L	MDD
Concord	BUS 25		216			P-32x6	P-32x6d	Buda	BUS 6-4 x5⅛	38.4	L	Fl Pr	Zen	V	ABos	M	L-N	Exi	12-220		40	B-L	MDD
Day-Elder	20 20	§	168	56 -58	5200	P-36x6	P-38x7	Cont	6B 6-3⅜x5	33.7	L	Pr Cs	Zen	V	Eis	M	ABos	Wil	6-153	Su	35†	B-L	MDD
Day-Elder	30-35 30	§	196	72¼-78°	7000	P-36x6	P-36-6	Buda	BUS 6-4 x5⅛	38.4	L	Pr Cs	Zen	V	Eis	M	L-N	Wil	6-153	Ce	35†	B-L	MDD
Denby	36 30	5000	216	74 -74	7000	P-36x6	P-36x6d	Cont	6B 6-3⅜x5	33.7	L	Pr Cs	Zen	V	RBos	M	RBos	Wil	12-130	††	††	Ful	MDD
Dorris	L-6 25		224	72¼-67†	6475	P-36x6	P-36x6d	Own	6-80 6-4 x5	38.4	I†	Pr Cs†	Str	V	ABos	B	N-E	Wil	12-153	N P†	35	B-L	MDD
Dorris	M-4 17		176	56 -58†	4200	P-32x6	P-32x6d	Own	K 4-4¼x5½	28.9	I†	Pr Cs†	Str	V	ABos	B	ABos	Wil	6-130	N P†	40	B-L	MDD
Dorris**	L6 29		224		7875	S-34x7	S-34x7d	Own	6-4 x5	38.4	I†	PrCs.†	Str	V	ABos	B	N-E	Wil	12-130		35	None	No
Dorris	M6 21		190		5100	P-32x6	P-32x6d	Own	6-4 x5	38.4	I†	Pr Cs†	Str	V	ABos	B	ABos	Wil	6-130		35	B-L	MDD
Douglas	21		182°	58 -86¾	5700	P-32x6	P-32x6d	Buda	DS-6 6-3⅝x5	31.5	L	Fl Pr	Sch	V	N-E	B	N-E	Exi	12-117	Ce	Opt	Ful	MDD
Fageol Street Car (Cal)	† 29		218	70 -76	6480	P-36x6	P-36x6d	HaS	50 4-4¼x5½	28.9	I	Pr Cs	Zen	V	Del	B	Del	USL	12-118	Ce	35	B-L	MDD
Fageol Parlor (Cal.)†	26		230	70 -70	6770	P-36x6	P-36x6d	HaS	75 6-4¼x5½	43.3	I	Pr Cs	Zen	V	Del	B	Del	USL	12-118	Ce	35	B-L	MDD
Fageol (Ohio)	503 29-60		230	72 -74⅞		P-36x6	P-36x6d	HaS	6-4¼x5½	43.3	Io	Pr Ck	Zen	V	Del	B	Del	Exi	6-130	Ce		Own	MDD
Federal	2B6 29		191°	60 -60	5500	P-32x6	P-32x6d	Cont	6B 6-3⅜x5	33.7	L	Pr Cs	Zen	V	Eis	M	Remy	Exi	6-215	Su	35	B&B	SP
Federal	S-25 17-21	1775	156	56 -57	3200	P-32x6	P-34x7	Knight	64 4-3⅝x4½	21.0	Sl	Pr Cs	Zen	V	A-L	B	A-L	Exi	6-120	Su	35	B&B	SP
Fith Ave. Coach	J 29	§	172	68¼-71¼	5850	P-32x6	P-32x6	Yell	EZ 4-4 x6	25.6	S	Pr Cs	Zen	V	Eis	M	§§N-E	Exi	12-120	N P	N P	Own	SP
Fifth Ave. Coach	L 55	§	172¾	67 -77½	6850	S-36x5	S-36x5	Yell	EZ 4-4 x6	25.6	S	Pr Cs	Zen	G	Eis	M	§§N-E	Exi	12-150	N P	N P	Own	SP
Garford	KB 19-21	§	180	57 -57	4400	P-32x6	P-34x7	Wisc	Y 6-3⅜x5	27.3	I	Pr Cs	Zen	V	A-L	B	DeJ	Wil	6-135	N P	N P	B-L	MDD
Garford	51D 29	§	187	68 -80	6500	P-36x6d	Buda	BUS 6-4 x5⅛	38.4	L	Pr Cs	Str	V	Spl	M	Remy	Wil	6-190	N P	N P	Own	MDD
Garford	50-6S 25-29		187°	64 -65⅝	6350	P-36x6	P-36x6d	Buda	6-4½x5⅝	48.6	L	Pr Ck	Zen	V	Spl	M	L-N	Wil	12-177	N P	N P	Own	MDD
Garford	CB 29-67	§	220	76 -76	7450°	P-36x6°	P-36x6d°	Wisc	Z 6-4½x5	48.6	I	Pr Ck	Zen	P	Spl	M	L-N	Wil	12-177	N P	N P	B-L	MDD
Gary	45B† 40		220	68 -72		P-36x6	P-36x6d	Buda	GL6 6-4½x6	48.6	L	Pr Cs	Str	V	Remy	B	Remy	††	††	††	††	Ful	MDD
Gotfredson	56-B-60 60	§	228½	71 -78	††	P-36x8	P-36x8	Buda	GL6 6-4½x6	48.6	L	Pr Cs	Zen	V	RBos	M	N-E	Wil	12-250	Opt	Opt	B-L	MDD
Gotfredson	50-B-29 29	§	208°	71 -75	††	P-34x7	P-34x7d	Buda	GL6 6-4½x6	48.6	L	Pr Cs	Zen	V	RBos	M	N-E	Wil	12-250	Opt	Opt	B-L	MDD
Graham Bros.	JC 12	1575	162	56 -57¼	3330	P-32x6	P-34x7	Dodge	4-3⅞x4½	24.0	L	Ci Sp	Stew	V	N-E	B	N-E	Wil	6-215	Su		Dodge	MDD
Graham Bros.	YC 21	1575	162	56 -57¼	3405	P-32x6	P-34x7	Dodge	4-3⅞x4½	24.0	L	Ci Sp	Stew	V	N-E	B	N-E	Wil	6-215	Su	30	Dodge	MDD
Gramm	N 15		164	57 -58	3100	P-32x6	P-32x6	Cont	8R 6-3⅜x4½	27.3	L	Pr Cs	Zen	V	A-L	B	A-L	USL	6-135	Han	43	Cov	MDD
Gramm	R 17-21		184°*	58 -60	4280	P-32x6	P-32x6d	Cont	6B 6-3⅜x5	33.7	L	Pr Cs	Zen	V	A-L	B	DeJ	USL	6-135	Pie		Ful	MDD
Guilder	20 18		160	58 -58	4000	P-32x6	P-32x6	Cont	8R 6-3⅜x4½	27.3	L	Pr Cs	Zen	V	ABos	B	ABos	Wil	12-	N P	N P	B-L	MDD
Guilder	26 21		184	60 -60	4500	P-32x6	P-32x6d	Cont	6B 6-3⅜x5	33.7	L	Pr Cs	Zen	V	ABos	B	ABos	Wil	6-	N P	N P	B-L	SP
Guilder	35 25	4450	204	62 -72	6000	P-32x6	P-32x6d	Cont	6B 6-3⅜x5	33.7	L	Pr Cs	Zen	V	Remy°	B	Remy°	Wil	6-	Opt	††	B-L	
Guilder	36 30		204°	64 -70	6000	P-36x6	Buda	BUS 6-4 x5⅛	38.4	L	Fl Pr	Zen	V	Eis	M	L-N	Wil	12-	Ce	30	B-L	MDD
Hahn	OB 18	§	145°	60 -60	4700	P-32x6	P-32x6	Herc	OX 4-4 x5	25.6	L	Pr Cs	Str	V	RBos	M	L-N	Wil	6-110	N P	N P	B-L	MDD
Hahn	KB 27	§	186°	60 -66	4900	P-32x6	P-32x6d	Cont	6B 6-3⅜x5	33.7	L	Pr Cs	Str	V	RBos	M	Del	Wil	6-175	N P	N P	B-L	MDD
Hahn	LB 36	§	246	69 -72	6800	P-38x7	P-38x7d	Cont	14H 6-4½x5¾	48.6	L	Fl Pr	Str	V	RBos	M	L-N	Wil	12-130	N P	N P	B-L	MDD
International	SLC-34 16		160	56 -56	2940	P-30x5	P-30x5	Lyc	CT 4-3⅜x5	22.5	L	Pr Ck	Zen	G	Remy	B	Remy	Pre	6-100	N P	N P	Long	SP
International	SLC-36 16		160	56 -56		P-30x5	P-30x5	Lyc	4SG 6-3¼x4½	25.3	L	Pr Cs	Zen	G	Remy	B	Remy	Pre	6-100	N P	N P	Long	SP
Kissel	55 21	2750	182	59 -57	4000	P-32x6	P-32x6d	Own	55 6-3⅝x5⅛	26.3	L	Pr Ck	Sch	V	Remy	B	Remy	Wil	6-153	N P	N P	War	MDD
Larrabee	XH4 30		220	70 -75	7000	P-36x6	P-36x6d	Cont	6B 6-3¾x5	33.7	L	Pr Cs	Zen	V	L-N	B	L-N	Exi	12-120	††	††	B-L	MDD
Larrabee	XH31 21		190	62 -66	5600	P-32x6	P-32x6d	Cont	6B 6-3¾x5	33.7	L	Pr Cs	Zen	V	Remy	B	Remy	Exi	6-240	††	††	B-L	MDD
Liberty**	150 29		232	67 -59		P-36x8¼		Wauk	6AL 6-4½x6¾	48.6	L	Pr Ck	Str	E-P	RBos°	BM		Exi	12-150			None	None
Mack (Parlor)	AB 25		230½	68 -63⅜	††	S*-36x6	S*-36x6d	Own	AB 4-4¼x5	28.9	L	Sp Pr	Str	V	Spl	M	N-E	Exi	12-120	Ce	Opt	Own	MDD
Mack (City)	AB 29		225	68 -63⅜	††	P*-34x7	P*-34x7d	Own	AB 4-4¼x5	28.9	L	Sp Pr	Str	V	Spl	M	N-E	Exi	12-120	Ce	Opt	Own	MDD
Mack (City)	AB 25		196	68 -63⅜	††	P*-32x6	P*-32x6d	Own	AB 4-4¼x5	28.9	L	Sp Pr	Str	V	Spl	M	N-E	Exi	12-120	Ce	Opt	Own	MDD
Mack**	AB 25		196	68 -63⅜	8385	P-34x7	P-34x7d	Own	AB 4-4¼x5	28.9	L	Sp Pr	Str	V	Spl	M	N-E	Exi	12-120	Ce	Opt	None	No
Mack**	AB 29		225	68 -63⅜	8545	P-34x7	P-34x7d	Own	AB 4-4¼x5	28.9	L	Sp Pr	Str	V	Spl	M	N-E	Exi	12-120	Ce	Opt	None	No
Mack	AL 25-29		233	71¼-63⅜	9000	P*-34x7	P*-34x7d	Own	AL 6-4¼x5	43.3	L	Pr Ck	Str	E-P	Spl	M	N-E	Exi	12-120	Ce	Opt	Own	SP
Mack**	AL 25-29		233	71¼-63⅜	9000	P*-34x7	P*-34x7d	Own	AL 6-4¼x5	43.3	L	Pr Ck	Str	E-P	Spl	M	N-E	Exi	12-120	Ce	Opt	None	No
Menominee	T 17	††	176	60 -58¾	5460	P-32x6	P-34x7	Wisc	Y 6-3⅜x5	27.3	I	Pr Cs	Zen	V	Remy	B	Remy	Wil	6-170	Opt	38	Dtl	MDD
Menominee	T 21	††	195 3/16	60 -58¾	6300	P-34x7	P-34x7	Wisc	H 6-4x5	38.4	I	Pr Cs	Zen	V	Remy	B	Remy	Wil	6-170	Opt	38	Dtl	MDD
Pierce Arrow	Z 25		196	67¼-76⅞	6240	P-36x6	P-36x6d	Own	Z 6-4 x5½	38.4	T	Fl Pr	Own	P	Del	B	Del	Wil	12-132	N P	N P	Own	MDD
Pierce Arrow	Z 30		220	67¼-76⅞	6350	P-36x6	P-36x6d	Own	Z 6-4 x5½	38.4	T	Fl Pr	Own	P	Del	B	Del	Wil	12-132	N P	N P	Own	MDD
Rehberger	B-3 30	††	204	64½-63⅛	7000	P-36x6	P-36x6d	Buda	BUS 6-4 x5⅛	38.4	L	Fl Pr	Zen	V	Eis	M	L-N	Wil	12-132	N P	N P	B-L	MDD
Reo	W 16-21*	2350	176	58 -58¼°	3954°	P-32x6	P-34x7d*	Own	T6 6-3⅞x5	24.3	F	Sp Pr	Sch	V	N-E	B	N-E	Wil	6-240	N P	N P	Own	MDD
Republic	81 20	††	185	60 -58	3600	P-34x7	P-34x7	Lyc	C-4 4-4 x5	25.6	L	Pr Cs	Str	V	ABos	B	ABos	USL	6-150	††	††	Ful	MDD
Royal	D 25		220	68 -72	6900	P-36x6	P-36x6	Wisc	Z 6-4½x5	48.6	I	Pr Cs	Zen	V	Eis	M	L-N	Exi	12-130			B-L	MDD
Royal	E 29	††	220	68 -72	7100	P-36x6	P-36x6	Wisc	Z 6-4½x5	48.6	I	Pr Cs	Zen	V	Eis	BM	L-N	Exi	12-130	Opt		B-L	MDD
Ruggles	60 20	§	180	58 -69½	5900	P-30x5	P-30x5d	Lyc	TF 6-3⅝x5	31.5	I	Pr Cs	Zen	V	Remy	B	Remy	Wil	6-177	N P	N P	B-L	MDD
Ruggles	70 30	§	236	73¾-75¾	7600	P-34x7	P-34x7d	Wisc	Z 6-4¼x5	48.6	I	Pr Cs	Zen	V	ABos	B	Remy	Wil	6-177	N P	N P	B-L	MDD
Ruggles	65 25		200	62½-66	6700	P-32x6	P-32x6d	Wisc	H 6-4x5	38.6	I	Pr Cs	Zen	V	Remy	B	Remy	Wil	6-177	N-P	N P	B-L	MDD

ABBREVIATIONS:

°—Others furnished.
*—At extra cost.
**—Gas Electric
§—Prices on application.
§§—Generator only.
†—1926 Specifications.
††—Manufacturers did not furnish information.
‡—Also Fabric Joints
ABos—American Bosch.
A-L—Auto-Lite.
A-P—Air Pressure.
B—Battery (Ignition)
B—Balloons (Tires).
Bal—Ball and Ball.
BM—Battery and Magneto
B&B—Borg & Beck.
BG—Bevel Gear.
B-L—Brown Lipe.
Blo—Blood.
B-PS—Bevel Pinion and Sector.
C&L—Cam and Lever.
Ce—Centrifugal.
CiSp—Circulating Splash
Cla—Clark.
Cle—Cleveland
Col—Columbia.
Cont—Continental.
Cot—Cotta. **Cov**—Covert
d—Dual.
Day—Dayton.
D-C—Disc Cast Steel
DD—Dead.
DeJ—DeJon.
Del—Delco.
Det—Detroit.
Dir—Direct.
D-P—Disk Pressed Steel.
DR—Double Reduction.
Dtl—Detlaff.
E—Free End. **Eat**—Eaton.
E-Ds—External Drive-shaft.
E-Fw—External Four Wheel.
Eis—Eisemann.
Eng—Engine.
E-P—Electric Pump
E-Rw—External Rear Wheels.
Exi—Exide.
½ F—Semi-Floating
¾ F—¾ Floating
F—In Head and Side.
FA—Drive taken through Front Axle.
FF—Full Floating.
Fl Pr—Full Pressure to all Main Bearings.
Ful—Fuller.
Fw—4-Wheel **G**—Gravity
GE—General Electric
Gem—Gemmer.
Gou—Gould. **Han**—Handy
HaS—Hall Scott.
Heli—Helical
Herc—Hercules.
Hob—Hobson.
Hoo—Hoopes.
Hyd—Hydraulic.
I—In Head.
Io—In Head: overhead camshaft.
I-Ds—Internal Driveshaft.
I-Fw—Internal Four Wheel.
IG—Internal Gear.
Ind—Indestructible.

Bus Chassis Specifications

see models having § sign in "American Gasoline Truck Specifications"

MISSION					REAR AXLE				BRAKES						SPRINGS			RUNNING GEAR							MAKE AND MODEL
Gearset or Electric Drive System									Service				Emergency		Front	Rear			Steering Gear			Wheels			
Make	Location	No. Fwd. Speeds or Elec. Motors	Low Gear Reduction	Universal Joints, Number and Make	Make and Model	Final Drive	Type	Total Ratio from Engine to Drive Wheels on Direct	Type and Location	Operation	Action	Braking Area (Sq. Ins.)	Type and Location	Braking Area (Sq. Ins.)	Length and Width (Ins.)	Length and Width (Ins.)	Shackles Type.	Front Axle Make	Make	Type	Outside Dia. of Minimum Turning Circle (Ft.)	Dia. of Rims	Make	(No. Dual = 1)	Type and Material	
B-L...	Eng...	4	††	-Uni...	Tim....6516	Wo.	FF..	5.40	I-Rw..	Mec..	Dir...	††	I-Rw..	††	††	††	M....	Tim...	Ross.	C&L.	68	24	Budd..	4	D-P...	Ace C
Own...	Eng...	4	4.8	4-Spi...	Tim....65250	Wo.	FF..	.....	I-Fw..	A-P..	Pow..	.....	I-Fw..	.....	49-4	64-5	M....	Tim...	Ross.	C&L.	60	20	Budd..	4	D-P...	A.C.F. 508
G.E...	**	2	**	4-Spi...	Tim.6535A1	Wo.	FF..	**	I-Fw..	A-P..	Pow..	.....	I-Rw..	.....	49-4	64-5	M....	Tim...	Ross.	C&L.	60	20	Budd..	4	D-P...	A.C.F.** 519
B-L...	Eng...	4	5.35	4-Blo...	Wise...67400	DR.	FF..	6.28	I-Rw..	Mec..	Dir...	456	I-Rw..	210	40-2½	60-3	M....	Shu...	Ross.	C&L.	68	20	Mot..	4	S-P...	Acme 116
B-L...	Eng...	4	5.35	4-Blo...	Wise...67400	DR.	FF..	6.28	I-Rw..	Mec..	Dir...	456	I-Rw..	210	40-2½	60-3	M....	Shu...	Ross.	C&L.	68	20	Mot..	4	D-P...	Acme 118-121
B-L...	Eng...	4	5.35	-Spi...	Wise..1331K	DR.	.....	.....	I-Rw..	.....	.....	.....	I-Rw..	.....	.....	.....	.....	Shu...	Ross.	C&L.	72	20	Budd..	4	D-P...	Bridgeport HB
B-L...	Eng...	3	5.35	2-Spi...	Col....53000	SB..	¾F.	5.12	E-Rw.	Mec..	Dir...	120	I-Rw..	108	46-2½	60-3	M....	Col...	Gem.	W&S.	56	20	Van..	4	S-C...	Brockway EB
B-L...	Eng...	4	5.35	2-Spi...	Col....53000	SB..	¾F.	5.12	E-Rw.	Mec..	Dir...	120	I-Rw..	108	46-2½	60-3	M....	Col...	Gem.	W&S.	56	20	Budd..	4	D-P...	Brockway EB4
B-L...	Eng...	4	5.35	3-Spi...	Wise....6731	DR.	FF..	6.33	I-Rw..	Mec..	Dir...	196	I-Rw..	114	46-2½	60-3	M....	Shu...	Ross.	C&L.	56	20	Budd..	4	D-P...	Brockway H
B-L...	Eng...	4	5.35	-Spi...	Tim.65220-S	Wo.	FF..	6.	I-Rw..	Mec..	Vac...	271	E-Ds..	181	46-3	60-3½	M....	Shu...	Ross.	C&L.	76½	20	Budd..		D-P...	Brockway JI-2
B-L...	SeU...	4	5.35	-Blo...	Tim....6566	Wo.	FF..	6.50	I-Rw..	Mec..	Dir...	185	I-Rw..	185	44-3	52-3	M....	Tim...	Ross.	C&L.	74	20	Budd..	4	D-P...	Clinton 65B
B-L...	SeU...	4	5.35	-Blo...	Tim....6516	Wo.	FF..	6.00	I-Rw..	Mec..	Dir...	234	I-Rw..	234	44-3	52-3	M....	Tim...	Ross.	C&L.	80	24	Budd..	4	D-P...	Clinton 65BS
B-L...	SeU...	4	5.35	5-Blo...	Tim....6516	Wo.	FF..	4.80	I-Rw..	Vac...	Dir...	460	I-Rw..	460	42-2½	60-3	M....	Tim...	Ross.	C&L.	35	24	Budd..	4	D-P...	Commerce 65
B-L...	SeU...	4	5.35	-Blo...	Tim....6516	Wo.	FF..	4.80	I-Rw..	Vac...	Dir...	.....	I-Rw..	.....	.....	.....	M....	Tim...	Ross.	C&L.	.....	24	Budd..	4	D-P...	Commerce 60
B-L...	.....	4	††	-Blo...	Tim....6571S	Wo.	.....	.....	I-Rw..	.....	.....	.....	I-Rw..	.....	.....	.....	M....	Shu...	Ross.	C&L.	76	24	Budd..	4	D-P...	Concord BUS
B-L...	Eng...	3	5.35	3-Spi...	Tim. 64600D	Wo.	½F.	6.50	I-Rw.	Mec..	Dir...	152	I-Rw..	152	42-2½	54-2½	M....	Tim...	Ross.	C&L.	60	24	Van..	4	S-C...	Day-Elder 20
B-L...	Eng...	4	5.35	3-Spi...	Tim 65700D°	Wo.	FF..	6.	I-Rw..	Mec..	Dir...	236°	I-Rw..	236°	46-2½	60-3	M....	Tim...	Ross.	C&L.	54	24	Budd..	4	D-P...	Day-Elder 30-35
Ful...	Eng...	4	4.80	4-Blo...	Cla.....3D	IG.	FF..	7.00	I-Rw..	Mec..	Dir...	††	E-Ds..	††	††	64-4	M....	Shu...	Ross.	C&L.	66	24	Budd..	4	D-P...	Denby 36
B-L...	Eng...	4	5.35	2-Spi...	Wise.....DR	DR.	½F.	††	I-Rw..	Mec..	Dir...	††	E-Ds..	††	††	60-4	M....	Tim...	Ross.	C&L.	72	24	Budd..	4	D-P...	Dorris L-6
B-L...	Eng...	4	5.35	3-Spi...	Wise.....DR	DR.	½F.	††	I-Rw..	Mec..	Dir...	††	E-Ds..	††	††	60-3	M....	Tim...	Ross.	C&L.	64	20	Budd..	4	D-P...	Dorris M-4
**	**	1	Non	-Spi...	Wise.....	DR.	½F.	††	I-Rw..	.....	.....	.....	I-Rw..	.....	.....	.....	M....	Tim...	Ross.	C&L.	66	20	Budd..	4	D-P...	Dorris** L6
B-L...	.....	4	5.35	-Spi...	Wise.....42B	DR.	½F.	††	I-Rw.	Mec..	Dir...	.....	E-Ds..	.....	40-2½	60-3	M....	Tim...	Ross.	C&L.	72	20	Budd..	4	D-P...	Dorris M6
Ful...	SeU...	4	.....	4-Blo...	Wise...67500	DR.	FF..	6.3	I-Rw.	Mec..	Dir...	210	I-Rw..	160	42-3	60-4	M....	Shu...	Ross.	C&L.	.....	20	Van..	4	S-C...	Douglas
B-L...	Eng...	4	5.35	4-Spi...	Tim....65190	Wo.	FF..	4.60	I-Rw..	.....	Opt...	130	I-Rw..	130	41-2½	56-3	M....	Tim...	Ross.	C&L.	76	20	Budd..	4	D-P...	Fageol StreetCar (Cal)†
B-L...	Eng...	4	5.35	4-Spi...	Tim....65190	Wo.	FF..	4.60	I-Rw.	Opt...	Opt...	130	I-Rw..	130	41-2½	56-3	M....	Tim...	Ross.	C&L.	77	20	Budd..	4	D-P...	Fageol Parlor (Cal.)†
Own...	Eng...	4	4.8	4-Spi...	Tim.....	Wo.	FF..	.....	I-Fw.	Opt...	Opt...	.....	I-Rw..	.....	43-2½	56-3	M....	Tim...	Ross.	C&L.	80	20	Budd..	4	D-P...	Fageol (Ohio) 503
B-L...	SeU...	7	9.50	2°-Sne°..	Tim.65600SP	Wo.	FF..	6.75	I-Ds.	Mec..	Dir...	142¼	I-Rw..	379	42-2½	54-3	M....	Own...	Gem.	W&R.	56	20	Budd..		D-P...	Federal 2B6
Own...	Eng...	3	3.65	3-Cle...	Tim....5620	SB..	FF..	7.50	I-Rw..	Mec..	Dir...	.....	I-Rw..	.....	38-2¾	52-2¼	M....	Own...	Gem.	W&W.	26	20	Mich..	4	S-C...	Federal S-25
Own...	SeU...	4	4.01	3-Sne...	Tim....6412	Wo.	½F.	5.40	I-Rw..	Mec..	Dir...	182	I-Rw..	182	48-3	62¾-3	R....	Tim...	Ross.	S&N.	61	20	Own...	4	S-C...	Fith Ave. Coach J
Own...	SeU...	4	4.01	3-Spi...	Own.....L	IG.	½F.	6.57°	E-Rw.	Mec..	Dir...	290	E-Ds..	207	48-3½	56-3½	M....	Own...	Ross.	S&N.	53	20	Own...	4	S-C...	Fifth Ave. Coach L
B-L...	Eng...	3	4.00	3-Uni...	Tim....5620H	SB.	FF..	4.62	E-Fw.	Hyd..	Dir...	412	I-Rw..	220	40-2½	56-2¼	M....	Tim...	Han..	S&L.	58	20	Day...	4	D-C	Garford KB
B-L...	SeU...	8	3.7	4-Spi...	Tim....6516	Wo.	FF..	5.40	I-Rw..	Mec..	Dir...	235	I-Rw..	235	42-3	60-3½	M....	Tim...	Ross.	S&N.	60	20	Day...	4	D-P...	Garford 51D
B-L...	SeU...	4	3.95	4-Spi...	Tim.....	Wo.	FF..	5.4	I-Rw.	Mec..	Dir...	.....	I-Rw..	.....	42-2½	56-3	M....	Tim...	Ross.	C&L.	.....	24	Budd..	4	D-P...	Garford 50-6S
B-L...	Eng...	4	3.77	4-Spi...	Tim....6522W	Wo.	FF..	4.8	I-Fw.	A-P..	.....	672	I-Rw..	††	42-2	60-1½	M....	Tim...	Ross.	C&L.	70	20	Budd..	4	D-P...	Garford CB
Ful...	Eng...	4	††	-Spi...	Tim.....	Wo.	FF..	††	††	††	††	††	††	††	††	††	††	Tim...	Ross.	C&L.	††	24	Budd..	4	D-P...	Gary 45B†
B-L...	Eng...	4	5.35	5-Spi...	Tim.....	Wo.	FF..	4.50	I-Fw.	A-P..	Pow...	408	I-Rw..	258	42-3	44-4	M....	Tim...	Ross.	C&L.	††	20	Budd..	4	D-P...	Gotfredson... 56-B-60
B-L...	Eng...	4	5.35	3-Spi...	Tim.....	Wo.	FF..	4.80	I-Fw.	A-P..	Pow...	336	I-Rw..	100	42-3	60-3½	M....	Tim...	Ross.	C&L.	††	20	Budd..	4	D-P...	Gotfredson... 50-B-29
Dodge	Eng...	3	4.13	3-U-P...	Own.....	SB..	½F.	5.5	I-Rw..	Mec..	Dir...	376	I-Rw..	188	37-2	56-3	M....	Clark	Ross.	C&L.	63	20	Clark	4	S-C...	Graham Bros. JC
Dodge	Eng...	3	4.13	3-U-P...	Own.....	SB..	½F.	6.29	I-Rw..	Mec..	Dir...	376	I-Rw..	188	37-2	56-3	M....	Clark	Ross.	C&L.	63	20	Clark	4	S-C...	Graham Bros. YC
Cov...	Eng...	3	4.00	-Blo...	Eat....1002	BG.	½F.	5.33	I-Rw.	Mec..	.....	.....	E-Ds..	.....	40-2¼	52-3	M....	Col...	Ross.	C&L.	.....	20	Smi...	4	S-C...	Gramm N
Ful...	Eng...	4	4.80	-Blo...	Eat....2252	BG.	FF..	4.75	I-Fw.	Mec..	.....	.....	E-Ds..	.....	44-3	60-3	M....	Col...	Ross.	C&L.	.....	20	Smi...	4	S-C...	Gramm R
B-L...	Eng...	3	4.80	2-M&E.	Cla.....500	SB.	½F.	6.28	I-Rw.	Mec..	Dir...	††	I-Rw..	††	40-2¼	56-2¼	M....	Shu...	Ross.	C&L.	70	20	Budd..	4	D-P...	Guilder 20
B-L...	Eng...	3	3.29	3-††	Wise....6730	DR.	FF..	6.00	I-Rw.	Mec..	Dir...	††	I-Rw..	††	42-2½	60-3	M....	She...	Ross.	C&L.	50	20	Budd..	4	D-P...	Guilder 26
B-L...	Eng...	4	.....	2-M&E.	Wise...67510	DR.	FF..	6.	I-Rw.	Vac...	Pow...	.....	I-Rw..	.....	44-3	60-3½	M....	Shu...	Ross.	C&L.	.....	20	Budd..	4	D-P...	Guilder 35
B-L...	Eng...	4	††	2-M&E.	Wise..1300K	DR.	¾F.	6.1	I-Rw.	Mec..	Dir...	††	I-Rw..	††	44-3	60-3½	M....	Shu...	Ross.	S&N.	70	24	Budd..	4	D-P...	Guilder 36
B-L...	Eng...	3	4.80	3-Spi...	Wise.....41	DR.	½F.	5.00	I-Rw.	Mec..	Dir...	††	I-Rw..	††	40-2½	56-2½	M....	She...	Ross.	C&L.	40	20	Hoo...	4	S-W...	ıfahn OB
B-L...	Eng...	4	5.35	3-Spi...	Wise...6730B	DR.	FF..	6.33	I-Rw.	Mec..	Dir...	††	I-Rw..	††	40-2½	56-3	M....	She...	Ross.	C&L.	60	20	Budd..	4	D-P...	ıfahn KB
B-L...	Eng...	4	3.95	4-Spi...	Wise....1630	DR.	FF..	††	I-Rw.	Mec..	Dir...	††	I-Rw..	††	42-3	59-3½	M....	She...	Ross.	C&L.	††	24	Budd..	4	D-P...	ıfahn LB
Own...	Eng...	3	4.00	-M.M..	Eat.....	TB.	DD.	25.10	E-Rw.	Mec..	Dir...	174	I-Rw..	174	39-2¼	57½-2½	M....	Eat...	CAS.	W&W.	58	....	Budd..		D-P...	International SLC-34
Own...	Eng...	3	4.00	-M.M..	Eat.....	TB.	DD.	.....	E-Rw.	Mec..	Dir...	174	I-Rw..	174	39-2¼	57½-2½	M....	Eat...	CAS.	W&W.	58	....	Budd..		D-P...	International SLC-36
Ful...	Eng...	4	4.8	2-Spi...	Tim..5620H	SB.	½F.	6.75	I-Fw.	Hyd..	Dir...	430	I-Rw..	215	38-2½	60-3	M....	Tim...	Ross.	C&L.	††	20	Budd..	4	D-P...	Kissel. 55
B-L...	Eng...	4	5.0	1-Sne...	She.....	DR.	FF..	6.68	I-Rw.	Mec..	Dir...	††	I-Rw..	††	42-3	60-3½	††	She...	Ross.	C&L.	††	24	Budd..	4	D-P...	Larrabee XH4
				2-Spi...																						
B-L...	Eng...	4	5.35	1-Sne...	Wise...67300	DR.	FF..	5.50	I-Rw..	Mec..	Dir...	††	I-Rw..	††	42-2½	54-3	††	She...	Ross.	C&L.	75	20	Budd..	4	D-P...	Larrabee XH31
				2-Spi...																						
Fra...	**	1	**	3-Pet...	Eat.....	DR.	FF..	Var...	**	**	**	**	-Rw..	....	44-3	60-4	M....	Eat...	Ross.	C&L.	74	20	Opt...	4	D-P...	Liberty** 150
Own...	Eng...	4	4.85	4-Spi...	Own.....AB	DR.	FF..	Var...	I-Rw..	Vac...	Dir...	364	E-Ds..	144	42½-3	63-3½	R....	Own...	Own..	W&W.	69	24	Budd..	4	D-P...	Mack (Parlor) AB
Own...	Eng...	4	4.85	4-Spi...	Own.....AB	DR.	FF..	Var...	I-Rw..	Vac...	Dir...	364	E-Ds..	144	42½-3	63-3½	R....	Own...	Own..	W&W.	64	20	Budd..	4	D-P...	Mack (City) AB
Own...	Eng...	4	4.85	4-Spi...	Own.....AB	DR.	FF..	Var...	I-Rw..	Vac...	Dir...	364	E-Ds..	144	42½-3	63-3½	R....	Own...	Own..	W&W.	55	20	Budd..	4	D-P...	Mack (City) AB
G. E...	**	1	**	4-Spi...	Own.....AB	DR.	FF..	Var...	I-Rw..	Vac...	Dir...	364	E-Ds..	144	42½-3	63-3½	R....	Own...	Own..	W&W.	55	20	Budd..	4	D-P...	Mack** AB
G. E...	**	1	**	4-Spi...	Own.....AB	DR.	FF..	Var...	I-Rw..	Vac...	Dir...	364	E-Ds..	144	42½-3	63-3½	R....	Own...	Own..	W&W.	64	20	Budd..	4	D-P...	Mack** AB
Own...	SeU...	4	5.27	5-Spi...	Own.....AL	DR.	FF..	Opt...	I-Rw..	Vac...	Dir...	255	E-Ds..	144	46-3½	70-3½	R....	Own...	Own..	W&W.	68	20	Budd..	4	D-P...	Mack AL
G. E...	**	1	**	5-Spi...	Own.....AL	DR.	FF..	Var...	I-Rw..	Vac...	Dir...	255	E-Ds..	144	46-3½	70-3½	R....	Own...	Own..	W&W.	68	20	Budd..	4	D-P...	Mack** AL
Cot...	Eng...	3	3.68	1-Spi...	Wise.....42	DR.	½F.	5.83	I-Rw..	Mec..	Dir...	††	E-Ds..	††	44-2½	56-3	M....	Shu...	Ross.	C&L.	61	20	Ind...	4	D-P...	Menominee T
Cot...	Eng...	4	5.20	1-Pic...	Wise.....67	DR.	½F.	5.83	I-Rw..	Mec..	Dir...	††	E-Ds..	††	44-2½	56-3	M....	Shu...	Ross.	C&L.	66½	20	Ind...	4	D-P...	Menominee T
				2-Spi...																						
Own...	SeU...	4	5.35	2-Spi...	Own.....Z	Wo.	FF..	6.00	E-Ds..	Mec..	Dir...	240	I-Rw..	515	41-3	60-3½	M....	Own...	Own..	S&N.	75	24	Budd..	4	D-P...	Pierce Arrow Z
Own...	SeU...	4	5.35	2-Spi...	Own.....Z	Wo.	FF..	6.00	E-Ds..	Mec..	Dir...	240	I-Rw..	515	41-3	60-3½	M....	Own...	Own..	S&N.	80	24	Budd..	4	D-P...	Pierce Arrow Z
B-L...	Eng...	4	5.35	3-Spi...	Tim....6571	Wo.	FF..	6.75	I-Rw..	Mec..	Dir	233	I-Rw..	233	41-2½	60-3	M....	Shu...	Ross.	C&L.	66	24	Budd..	4	D-P...	Rehberger B-3
Own...	SeU...	3	4.40	2-Pet...	Own.....W	SB.	½F.	5.70	I-Fw.	Mec..	Dir...	346	E-Rw.	275	38-2¼	54-2½	M....	Own...	Own..	B-PS.	62	20	Budd..	4	D-P...	Reo. W
Ful...	Eng...	3	4.00	3-Uni...	Eat....10000	IG.	FF..	6.28	E-Ds..	Mec..	Dir...	96	I-Rw..	175	36½-2	56-2½	M....	Eat...	Jac..	S&N.	††	20	Van..	4	S-C...	Republic 81
B-L...	Eng...	4	5.35	4-Pet...	Tim....6522	Wo.	FF..	5.3	I-Ds.	Mec..	Dir...	.....	I-Rw..	.....	41-3	60-3½	M....	Tim...	Ross.	C&L.	67	24	Budd..	4	D-P...	Royal D
B-L...	Eng...	4	5.35	4-Cle...	Tim....6522	Wo.	FF..	5.30	Rw-Ds	Mec..	Dir...	††	I-Rw..	††	41-3	60-3½	M....	Tim...	Ross.	C&L.	67	24	Budd..	4	D-P...	Royal E
B-L...	Eng...	4	5.35	2-Uni...	Wise.....460	DR.	FF..	5.50	I-Rw..	Vac...	Dir...	††	I-Rw..	††	38¾-2¼	54½-3	M....	Col...	Jac..	S&N.	56	24	Budd..	6	D-P...	Ruggles 60
B-L...	Eng...	4	4.01	4-Uni...	Wise..1340K	DR.	FF..	5.05	I-Rw..	Mec..	Dir...	575	I-Rw..	288	44-3	60-4	M....	She...	Jac..	S&N.	64	20	Budd..	4	D-P...	Ruggles 70
B-L...	Eng...	4	5.35	4-Uni...	Wise...67300	DR.	FF..	5.83	I-Rw..	Vac...	Dir...	452	I-Rw..	211	39-2½	60-3	M....	Shu...	Jac..	S&N.	60	20	Budd..	4	D-P...	Ruggles 65

I-Rw—Internal Rear wheel.
Jac—Jacox.
L—L Head.
L-N—Leece Neville.
Lyc—Lycoming.
M—Magneto. (Ignitipn)
M—Metal (Shackles).
MDD—Multiple Dry Disk.
M&E—Merchant & Evans.
Mec—Mechanical.
Mich—Michigan
M.M.—Mecnanics Machine
Mot—Motor Wheel.
N-E—North East.
N-P—No Provision.
Opt—Optional.

P—Pneumatic (Tires).
P—Pressure (Fuel Feed).
Pet—Peters.
Pic—Pick.
Pie—Pierce
Pow—Power Operated.
PrCs—Pressure to all crankshaft and connecting rod bearings; splash to other parts.
PrCk—Pressure to all camshaft connecting rod and camshaft bearings; splash to other parts
Pre—Prestolite.
R—Rubber.
RA—Wheels Swung from Radius Arms.

RBos—Robert Bosch.
RwDs—Rear wheels & drive shaft
S—Solid.
SB—Spiral Bevel.
S-C—Spoked Cast Steel.
Sch—Schebler.
SeU—Separate Unit.
She—Sheldon.
Shu—Shuler.
S&L—Screw and lever
Sl—Sleeve Valve.
Smi—Smith.
S&N—Screw and Nut.
Sne—Snead.
SP—Single Plate.
S-P—Spoked Pressed Steel.

Spi—Spicer
Spl—Splitdorf.
SpPr—Pressure to main crankshaft bearings only. Splash to other parts.
Stew—Stewart
Str—Stromberg.
Su—Suction.
S-W—Spoked Wood.
T—T Head.
TB—Straight Bevel
Tim—Timken.
Uni—Universal Machine.
Un FA—Unit with Front Axle
U-P—Universal Products

V—Vacuum.
Vac—Vacuum.
Var—Various.
Ves—Vesta.
War—Warner Corp.
Wauk—Waukesha.
Wes—Westinghouse.
Wil—Willard.
Wisc—Wisconsin.
Wo—Worm.
W&R—Worm and Roller
W&S—Worm and Sector
W&W—Worm & Wheel.
Yell—Yellow Sleeve.
Zen—Zenith.

American Gasoline

MAKE AND MODEL	GENERAL							ENGINE						ELECTRICAL SYSTEM					GOVERNOR		TRANS	
	Passenger Rating	Price—Chassis	Standard Wheelbase (Ins.)	Tread, Front and Rear (Ins.)	Chassis Weight (Lbs.)	Tires, Type and Sizes: Front (Ins.)	Tires, Type and Sizes: Rear (Ins.)	Make and Model	Number of Cylinders, Bore and Stroke (Ins.)	Rated Horse Power (N.A.C.C.)	Valve Arrangement	Oiling System	Fuel System: Carbureter Make	Fuel System: Fuel Feed	Ignition System: Make	Ignition System: Current Source	Generator and Starter Make	Battery: Make	Battery: Voltage and Amp. Hour Capacity	Type	Maximum Governed Speed (M.P.H.)	Clutch: Make	Clutch: Type
Safeway	55	29	.....	255	71 –78	9600	B38x9.00	B38x9.00	Cont....14H	6-4½x5¾	48.6	L...	Fl Pr..	Str...	V...	Eis...	M..	N-E..	N-E..	12–154	N P...	N P...	B-L..	MDD.
Safeway	63	29	.....	255	71 –78	9350	B34x9.00	B34x9.00	Cont....12T	6-4¼x5¼	44 .0	L...	Fl Pr..	Str...	V...	Eis...	M..	N-E..	N-E..	12–154	N P...	N P...	B-L..	MDD.
Safeway	64	29	.....	224	71 –78	9200	B32x9.00	B38x9.00	Cont....12T	6-4¼x5¼	44 .0	L...	Fl Pr..	Str...	V...	Eis...	M..	N-E..	N-E..	12–154	N P...	N P...	B-L..	MDD.
Safeway	66	61	.....	234	74 –78	10250	P-36x8	P-36x8	Cont....14H	6-4½x5¾	48 .6	L...	Fl Pr..	Str...	V...	Eis...	M..	N-E..	N-E..	12–154	N P...	N P...	B-L..	MDD.
Schacht	N	25	§	205°	69 –68½	7800	P-36x6	P-36x6d	Buda...BU5	6-4x5½	38 .4	L...	PrCs..	Zen...	V...	L-N...	B..	L-N...	Exi...	12–175	N-P...	N-P...	B-L..	MDD.
Selden Pacemk†		18	§	184°	56 –56	3600	S-32x6	S-32x6	Cont....8R	6-3⅜x4½	27 .3	L...	Pr Cs..	Str...	V...	N-E...	B..	N-E..	Wil...	12–150	Opt..	50	B-L..	MDD.
Selden R'dmaster†		21	§	210°	56 –58	5200	S-32x6	S-36x8	Cont....6B	6-3¾x5	33 .7	L...	Pr Cs..	Str...	V...	N-E...	B..	N-E..	Wil...	12–150	Opt..	50	B-L..	MDD.
Sterling	GB6	29	§	Opt.	60¼–63	6800	P-36x6	P-36x6d	Own.....6A	6-4 x5¾	38 .4	L...	Pr Cs..	Zen...	V..	Eis...	M..	RBos..	Gou...	12–	Ce...	35	B-L..	MDD.
Stewart	20	25	$6500	220	64½–73¼	6900	P-34x7	P-34x7d	Cont....7I	6-4½x5¼	43 .7	L...	Fl Pr..	Zen...	V..	Remy	B..	Remy	USL	12–118	Su...	55	Own..	MDD.
Studebaker	N	15	§	158	.....	3585	B34x7.30	P-34x7	Own.....	6-3⅞x5	36 .0	L...	Fl Pr..	Bal...	V...	Remy	B..	Remy	Wil...	6–155	N P...	N P...	Own..	SP....
Studebaker	A	20		184	.....	3760	B34x7.30	P-34x7	Own.....	6-3⅞x5	36 .0	L...	Fl Pr..	Bal...	V...	Remy	B..	Remy	Wil...	6–155	N P...	N P...	Own..	SP....
Studebaker	D	21		184	.....	4085	P-32x6	P-32x6	Own.....	6-3⅞x5	36 .0	L...	Fl Pr..	Bal...	V...	Remy	B..	Remy	Wil...	6–155	N P...	N P...	Own..	SP....
Twin City	DW	25		210	72 –76	8000	P-36x6	P-36x6d	Own.....TW	4-4¼x6	28 .9	I...	Pr Cs..	Zen...	V..	ABos..	M..	L-N...	Wil...	12–130	N P...	N P...	Ful..	MDD.
Uppercu Coach	S	32		240	70 –80	7400	S*-36x7	S*-36x10	Wauk....6A	6-4½x5¾	48 .6	L...	Fl Pr..	Sch...	V..	ABos..	M..	L-N...	Exi...	12–160	N P...	N P...	B&B..	SP....
Victor	80B	28–35	6600	221	64½–75	8000	P-38x7	P-38x7d	Cont....14H	6-4½x5¾	48x6	L...	Fl Pr..	Zen...	V..	Eis...	M..	N-E..	Wes..	6–125	N-P...	N-P...	Ful..	MDD.
Ward LaFrance	3B	25	§	196	58 –65½	6300	P-36x6	P-36x6d	Wauk...DU	4-4½x6¼	32 .4	L...	Pr Cs..	Str...	V..	RBos..	M..	Remy	Wil...	6–177	††	††	B-L..	MDD.
Ward LaFrance	4B6	25	5600	224	62 –72	6600	P-34x7	P-34x7d	Wauk...6QL	6-4 x5¾	38 .4	L...	Pr Ck..	Str...	V..	RBos..	M..	A-L°	Pre...	12–174	Ce...	.....	B-L..	MDD.
White	53	14–21	4250	180	64 –67½	6000	B34x7.50	B34x7.50d	Own...GRB	4-4¼x5¾	28 .9	L...	Pr Ck..	Zen...	V..	Opt...	M..	L-N..	Opt...	12–132	Ce...	.....	Own..	SP....
White	50B	25–29	5350	198°	57¼–67½	6665	P-34x7	P-34x7d	Own...GRB	4-4¼x5¾	28 .9	L...	Pr Cs..	Zen...	V..	Opt...	M..	L-N..	Opt...	12–132	Ce...	Opt..	Own..	SP....
Wilcox	M†	.....	§	226¼	68½–80	.....	P-36x6	P-36x6d	Cont....14H	6-4½x5¾	48 .6	L...	Fl Pr..	Zen...	V..	RBos..	B..	Del...	Exi...	12–	††	50	††	MDD.
Wilcox	GW	29	.....	240	.....	.....	P-38x7	P-38x7d	Wauk....6AL	6-4½x5¾	48 .6	L...	Pr Ck..	Zen...	V..	RBos..		Del...	Exi...	12–	.....	.....	.....	MDD.
Yellow Coach	Z	67		200	71 –73⅝	7313	S-34x6	S*34x6d	Own.....Z	4-4 x6	25 .6	Sl...	Pr Cs..	Zen...	G..	Opt...	M..	N-E..	Ves..	12–100	Ce...	32	Long..	SP....
Yellow (Double)	YZ	67		200	71 –73⅝	7515	S-34x6	S*-34x6d	Own.....YZ	6-4¼x5½	43 .3	Sl...	Pr Cs..	Zen...	V..	N-E...	B..	N-E..	Ves..	12–100	Ce...	35	Long..	SP....
Yellow (Single)	YZ	29		200	72¾–76¾	7515	P-36x6	P-36x6d	Own.....YZ	6-4¼x5½	43 .3	Sl...	Pr Cs..	Zen...	V..	N-E...	B..	N-E..	Ves..	12–100	Ce...	35	Long..	SP....
Yellow	Y	29		225	73 –70¾	6000	P-38x8¼	P-36x6d	Own.....Y	6-4¼x5½	43 .3	Sl...	Pr Cs..	Zen...	V..	N-E...	B..	N-E..	Ves..	12–100	None..	50	Long..	SP....
Yellow**	Z-6	33–66		230	71 –73⅝	Var..	S-34x6	S-34x6d	Own.....YZ	6-4¼x5½	43 .3	Sl...	Pr Cs..	Zen...	V..	N-E...	B..	N-E..	Exi...	12–100	None..	Opt..	None..	Non..
Yellow Coach	X	17–21		210	66 –68¾	4800	B-34x7 5	B34x7.5d	Own.....X	6-3½x4½	29 .4	Sl...	Pr Cs..	Zen...	V..	N-E...	B..	N-E..	Ves..	12–100	Ce...	††	Long..	SP....

ABBREVIATIONS:

°—Others furnished.
*—At extra cost.
**—Gas Electric
§—Prices on application.
§§—Generator only.
†—1925 Specifications.
††—Manufacturers did not furnish information.
‡—Also Fabric Joints
ABos—American Bosch.
A-L—Auto-Lite.
A-P—Air Pressure.
B—Battery.
B—Balloons (Tires).
Bal—Ball and Ball.
B&B—Borg & Beck.
BG—Bevel Gear.
B-L—Brown Lipe.
Blo—Blood.
BM—Battery and Magneto
B-PS—Bevel Pinion and Sector.
C&L—Cam and Lever.
Ce—Centrifugal.
CiSp—Circulating Splash
Cla—Clark.
Cle—Cleveland
Col—Columbia.
Cont—Continental.
Cot—Cotta. **Cov**—Covert
d—Dual.
Day—Dayton.
D-C—Disc Cast Steel
DD—Dead.
DeJ—DeJon.
Del—Delco.
Det—Detroit.
Dir—Direct.
D-P—Disk Pressed Steel.
DR—Double Reduction.
Dtl—Detlaff.
E—Free End. **Eat**—Eaton.
E-Ds—External Drive-shaft.
E-Fw—External Four Wheel.
Eis—Eisemann.
Eng—Engine.
E-P—Electric Pump
E-Rw—External Rear Wheels.
Exi—Exide.
½ F—Semi-Floating
¾ F—¾ Floating
F—In Head and Side.
FA—Drive taken through Front Axle.
FF—Full Floating.
Fl Pr—Full Pressure to all Main Bearings.
Ful—Fuller.
Ew—4-Binney. **G**—Gravity.
GE—GeneralElectric
Gem—Gemmer.
Gou—Gould. **Han**—Handy.
HaS—Hall Scott.
Heli—Helical.
Herc—Hercules.
Hob—Hobson.
Hoo—Hoopes.
Hyd—Hydraulic.
I—In Head.
Io—In Head: Overhead. camshaft,
I-Ds—Internal Driveshaft.
I-Fw—Internal Four Wheel.
IG—Internal Gear.
Ind—Indestructible.

American Taxicab

MAKE AND MODEL	GENERAL				ENGINE																							
	Price $	Wheelbase (Ins.)	Tire Size (Ins.)	Weight with Cab (Lbs.)	Make and Model	No. of Cylinders, Bore and Stroke (Ins.)	Rated H. P. (N.A.C.C.)	Piston Displacement (Cu. Ins.)	Compression Ratio	Suspension	Cylinder Head	Number Cast in One Piece	Valves: Arrangement	Valves: Head Material	Valves: Drive	Piston Material	Oiling System: Type	Oiling System: Pump Type	Water Circulation	Fuel System: Carbureter Make	Fuel System: Fuel Feed	Electrical System: Ignition: Make	Electrical System: Ignition: Current Source	Electrical System: Generator and Starter Make	Electrical System: Voltage
Bauer	2450	115	30x5	4100	Buda WTU	4-3¾x5½	22.50	226.4	4.10	3	Det...	4	L...	Ast...	Heli...	SS...	Pr Cs...	Gear..	Pump...	Zenith....	Vac...	ABos...	B...	ABos..	6-8
Checker F	2500	117	33x5	4300	Buda WTU	4-3¾x5⅛	22.50	226.4	4.10	3	Det...	4	L...	Ast...	Heli	SS...	Pr Cs...	Gear..	Pump...	Zenith....	Vac...	RBos...	M...	A-L....	6-8
Checker G4	.....	117½	32x6.75	4500	Buda WTU	4-3¾x5⅛	22.50	226.4	4.10	3	Det...	4	L...	Ast...	Heli...	SS...	Pr Cs...	Gear..	Pump...	Zenith....	E-P...	A-L....	B...	A-L....	6-8
Checker G6	.....	124¾	32x6.75	4700	Buda..HS6	6-3⅛x4½	27.34	241 .6	4.40	3	Det...	6	L...	Sil§..	Heli...	CI...	Fl Pr...	Gear..	Pump...	Zenith....	E-P...	A-L....	B...	A-L....	6-8
Dodge Brothers	.....	116	31x5 .25	.....	Own.....	4-3⅞x4½	24 .03	212 .3	4.0	3	Det...	4	L...	Sil§..	Heli...	Al...	Sp Pr...	Ecc...	Pump...	Stewart....	Vac...	N-E....	B...	N-E....	6
Driggs	1950	109	30x3½	2200	Own.....	4-3¼x4½	16 .90	149 .0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Zenith....	Gra...	ABos...	M...	ABos..	6-8
Elcar 8-81	2300	127	32x6.50	3480	Lyc 4HM..	8-3¼x4½	33 .80	298 .6	5 .0	4	Det...	8	L...	Sil§..	Cha...	CI...	Pr Cs...	Gear..	Pump...	Swan....	Vac...	Remy...	B...	Remy...	6-8
Gotfredson 24 T	2600	116⅝	32x6.20	4180	Buda WTU	4-3¾x5⅛	22.50	226.4	4.10	3	Det...	4	L...	CI....	Heli...	SS...	Pr Cs...	Gear..	Pump...	Zenith....	Vac...	RBos...	BM.	Remy..	6-8
H. C. S. 5	1975	110	29x4½	3340	Wauk 2..	4-3¼x4½	16 .90	149 .0	4 .5	3	Det...	4	L...	CI....	Heli...	CI...	Pr Cs...	Ecc...	ThS....	Zenith....	Gra...	ABos...	B...	ABos..	6-8
§§Luxor L	2897	117¾	33x4½	4000	Buda WTU	4-3¾x5⅛	22.50	226.4	4.10	3	Det...	4	L...	Ast...	Heli...	SS...	Pr Cs...	Gear..	Pump...	Zenith....	Vac...	ABos...	M...	ABos..	6-8
Majestic 5-D	2665	118½	30x5	4270	Buda WTU	4-3¾x5⅛	22.5	226.4	4.10	3	Det...	4	L...	Ast...	Heli...	SS...	Pr Cs...	Gear..	Pump...	Zenith....	Vac...	ABos...	M...	ABos..	6-8
§§Moller (Astor)	2295	118	33x4½	4260	Buda WTU	4-3¾x5⅛	22.50	226 .4	4.10	3	Det...	4	L...	Ast...	Heli...	SS...	Pr Cs...	Gear..	Pump...	Zenith....	Vac...	RBos...	M...	RBos..	6-8
Oakland 6	1195	113	30x5 .25	2030	Own OS..	6-2⅞x4¾	19 .84	185 .0	4 .8	3	Det...	6	L...	Sil....	Cha...	SS...	Pr Ck...	Gear..	Pump...	Marvel....	Vac...	D-R....	B...	D-R....	6-8
Pennant	2895	118	33x4½	3800	Buda WTU	4-3¾x5⅛	22.50	226.4	4.10	3	Det...	4	L...	Ast...	Heli...	SS...	Pr Cs...	Gear..	Pump...	Zenith....	Vac...	ABos...	M...	West*..	6-8
Premier 4-F	2400	112	30x5	4150	Buda WTU	4-3¾x5⅛	22.50	226.4	4.10	3	Det...	4	L...	Ast...	Heli...	SS...	Pr Cs...	Gear..	Pump...	Zenith....	Vac...	ABos...	B...	ABos..	6-8
Rauch & Lang T	2350	112	33x4½	3400	Buda..WU	4-3¾x5½	22.50	226.4	4.10	3	Int...	4	L...	Ast...	Heli...	SS...	Pr Cs...	Gear..	ThS....	Zenith....	Gra...	ABos...	M...	†Dyne‡.	6-8
Reo V-4	1935	113	32x4½°	3465	Own T4...	4-4⅛x4½	27 .20	240 .0	4 .0	4	Det...	4	F...	CI§..	Heli...	Al...	Sp Pr...	Pist...	Pump...	Johnson....	Vac...	N-E....	B...	N-E....	6-8
Reo V-6	2085	113	32x4½°	3672	Own T6...	6-3⅛x5	24 .30	239 .0	4 .50	4	Det...	6	F...	CI§..	Heli...	Al...	Sp Pr...	Pist...	Pump...	Schebler....	Vac...	N-E....	B...	N-E....	6-8
Roamer 8-88	3285	136	32x6.20	3980	Lyc 4HM..	8-3¼x4½	33 .8	298 .6	5 .0	4	Det...	8	L...	Cha...	Sil§..	CI...	Pr Ck...	Gear..	Pump...	Schebler....	Vac...	A-L....	B...	A-L....	6-8
Royal Martel	.....	116	32x6.20	.....	Lyc CE...	4-3⅛x5 ¼	21 .8	213 .6	4 .1	3	Det...	4	L...	Sil....	Heli...	CI...	Pr Cs...	Gear..	Th S....	.....	.....	RBos...	BM.	.....	6-8
Willys-Knight GHF	2250	118	32x4½	.....	Own 65..	4-3⅝x4½	21 .03	185 .8	.....	4	Det...	4	S...	None..	Cha...	Al...	Pr Cs...	Gear..	ThS....	Tillotson....	Vac...	A-L....	B...	A-L....	6-8
Yellow 05	2600	114	30x5	4175	Own S....	4-3⅞x5	18 .90	185 .6	4 .8	4	Det...	4	S...	None..	Cha...	CI...	Pr Cs...	Gear..	ThS....	Zenith....	Gra...	N-E....	B...	N-E....	6-8

ABBREVIATIONS:

*—At extra cost
°—Others furnished
§§—1926 specifications
§—Exhaust valve only
†—Starter at extra cost
‡—Starter Make Gray & Davis
A—Artillery
A-Bos—American Bosch
A-L—AutoLite
Al—Aluminum
Ast—Alloy Steel
B—Battery
B-L—Brown-Lipe
B P S—Bevel Pinion & Sector
B&B—Borg & Beck
BM—Battery & Magneto
C—Cast
C&L—Cam and Lever
Cha—Chain
CI—Cast Iron
Col—Columbia
CR—Central Reservoir
D—Disc
Det—Detachable
Det—Detroit
D-R—Delc-Remy
Dyne—Dyneto
Ecc—Eccentric
Eng—Unit with Engine
E-P—Electric Pump
Ext-Ds—External Drive Shaft
Ext-Fw—External Four Wheels
Ext-Rw—External Rear Wheel
F—Valve in Head and Side
f—Fabric
FlPr—Full Pressure to all Bearings
¾ F—¾ Floating
½ F—½ Floating
Gra—Gravity
F F—FullFloating
Gem—Gemmer
Heli—Helical Gear
Hyd—Hydraulic
Int—Integral
Int-Rw—Internal Rear Wheel
L—Both Valves at Side
Lav—Lavine
Lyc—Lycoming

Bus Specifications—Continued

MISSION					REAR AXLE				BRAKES						SPRINGS			RUNNING GEAR								MAKE AND MODEL
Gearset or Electric Drive System									Service				Emergency		Front	Rear			Steering Gear			Wheels				
Make	Location	No. Fwd. Speeds or Elec. Motors	Low Gear Reduction	Universal Joints, Number and Make	Make and Model	Final Drive	Type	Total Ratio from Engine to Drive Wheels on Direct	Type and Location	Operation	Action	Braking Area (Sq. Ins.)	Type and Location	Braking Area (Sq. Ins.)	Length and Width (Ins.)	Length and Width (Ins.)	Shackles Type.	Front Axle Make	Make	Type	Outside Dia. of Minimum Turning Circle (Ft.)	Dia. of Rims	Make	No. (Dual = 1)	Type and Material	
B-L..	Eng...	3	4.00	2-Spi....	Tim....6422	Wo	FF..	5.00	I-Fw..	Air...	Dir...	1084	I-Fw..	1084	50–3½	46–4	M....	Tim...	Ross.	C&L..	75	20	Budd..	6	D-P...	Safeway.....55
B-L..	Eng...	4	5.35	2-Spi....	Tim....6422	Wo	FF..	5.00	I-Fw..	Air...	Dir...	1084	I-Fw..	1084	50–3½	46–4	M....	Tim...	Ross.	C&L..	75	20	Budd..	6	D-P...	Safeway.....63
B-L..	Eng...	4	5.35	2-Spi....	Tim....6422	Wo	FF..	5.00	I-Fw..	Air...	Dir...	1084	I-Fw..	1084	50–3½	46–4	M....	Tim...	Ross.	C&L..	70	20	Budd..	6	D-P...	Safeway.....64
B-L..	Eng...	3	4.00	2-Spi....	Tim....6422	Wo	FF..	7.00	I-Fw..	Air...	Dir...	1246	I-Fw..	623	50–3½	46–4	M....	Tim...	Ross.	C&L..	72	20	Budd..	6	D-P...	Safeway.....66
Ful°	SeU...	8	6.33	4-Spi....	Wise.1250–K	DR	FF..	7.33	I-Rw..	Vac...	Dir...	530	E-Ds..	135	42–3	60–3½	M....	Own...	Ross.	C&L..	33	24	Budd..	4	D-P...	Schacht.....N
B-L..	Eng...	3	4.80	3-Blo....	Cla....B501	SB..	¾F.	Opt...	E-Rw..	Mec...	Dir...	††	I-Rw..	††	41–2¼	60–2½	M....	Shu...	Ross.	C&L..	††	20	Van..	4	S-C...	Selden.....Pacemk†
B-L..	Eng...	4	5.35	3-Blo....	Cla....B720	SB..	¾F.	Opt...	E-Rw..	Mec...	Dir...	††	I-Rw..	††	46–2¼	60–3	M....	Tim...	Ross.	C&L..	††	20	Van..	4	S-C...	Selden...R'dmaster†
B-L..	Eng...	4	5.35	2-Spi....	Tim.....	Wo	FF..	6.00	I-Rw..	Mec...	Dir...	††	I-Rw..	††	48–3	54–3	M....	Tim...	Ross.	C&L..	††	24	Budd..	4	D-P...	Sterling.....GB6
Own..	Eng...	4	††	3-Spi....	Cla.....	Wo	FF..	5.50	I-Rw..	Vac...	Dir...	††	E-Ds..	††	42–3	60–4	M....	Own...	Ross.	C&L..	40	20	Budd..	4	D-P...	Stewart.....20
Own..	Eng...	3	††	-Spi....	Own.....	SB..	½F.	.....	-Fw..	Hyd...	Dir...	††	E-Ds..	††	††	††	.....	Own...	Own...	††	61	20	Budd..	4	D-P...	Studebaker.....N
Own..	Eng...	3	††	-Spi....	Own.....	SB..	½F.	.....	-Fw..	Hyd...	Dir...	††	E-Ds..	††	††	††	.....	Own...	Own...	††	67	20	Budd..	4	D-P...	Studebaker.....A
Own..	Eng...	3	††	-Spi....	Own.....	SB..	½F.	.....	I-Fw..	Hyd...	Dir...	††	E-Ds..	††	††	††	.....	Own...	Own...	††	67	20	Budd..	4	D-P...	Studebaker.....D
Ful...	Eng...	4	6.3	3-Spi....	Tim. 6518B-2	Wo	FF..	4.80	I-Rw..	Mec...	Dir...	500	I-Rw..	500	40–3	60–3½	M....	Tim...	Ross.	C&L..	72	24	Budd..	4	D-P...	Twin City.....DW
Ful...	UnFa..	4	6.25	4-Own...	Own....Spec.	FA..	RA.	None..	I-Rw..	A-P...	Dir...	††	E-Ds..	††	Heli...	64–4	R&E.	Own...	Ross.	C&L..	60	.....	Budd..	4	D-P...	Uppercu Coach.....S
Ful...	Eng...	4	6.20	4-Uni...	Wise..1305K	DR	FF..	6.1	I-Rw..	Mec...	Dir...	††	E-Ds..	††	44–3	60–4	M....	Shu...	Ross.	C&L..	79	24	Budd..	4	D-P...	Victor.....80B
B-L..	SeU...	4	††	-Spi....	Tim....6566	Wo	FF..	6.00	I-Rw..	Mec...	Dir...	††	I-Rw..	††	††	††	M....	Col...	Ross.	C&L..	72	24	Budd..	4	D-P...	Ward LaFrance...3B
B-L..	Eng...	4	5.35	3-Spi....	Tim.....	Wo	FF..	5.4	E-Fw..	Mec...	Pow...	.....	I-Ds..	.....	.....	.....	M....	Shu...	Ross.	C&L..	.....	20	Budd..	4	D-P...	Ward LaFrance...4B6
Own..	Eng...	4	4.12	3-Spi....	Own.....	SB..	½F.	4.38°	I-Rw..	Vac...	Dir...	.....	E-Ds..	.....	41½–2½	60–3	M....	Own...	Own...	W&S..	57	20	Budd..	4	D-P...	White.....53
Own..	Eng...	4	4.12	3-Spi....	Own....50B	DR°	½F.	4.67°	I-Rw..	A-P...	Pow...	††	E-Ds..	††	41½–2½	60–3	M....	Own...	Own...	W&S..	66	20	Budd..	4	D-P...	White.....50B
B-L..	Eng...	4	3.95	-Spi....	Tim....6522	Wo	FF..	.....	I-Rw..	††	††	††	E-Ds..	††	††	††	††	Tim...	Ross.	C&L..	††	24	Budd..	4	D-P...	Wilcox.....M
B-L..	.....	4	.....	-Spi....	Tim....6522	Wo	FF..	.....	I-Rw..	.....	.....	.....	E-Ds..	.....	.....	.....	.....	Tim...	Ross.	C&L..	.....	24	Budd..	4	D-P...	Wilcox.....GW
B-L..	SeU...	4	4.98	2-‡Spi...	Own.....Z	Wo	½F.	7.00	I-Rw..	Mec...	Dir...	594	I-Rw..	††	48–3½	60–4	R....	Own...	Ross.	C&L..	72	24	Own...	4	S-C...	Yellow Coach.....Z
B-L..	SeU...	4	4.98	2-‡Spi...	Own.....YZ	Wo	½F.	7.00	I-Rw..	Mec...	Dir...	594	I-Rw..	††	48–3½	60–4	R....	Own...	Ross.	C&L..	72	22	Own...	4	S-C...	Yellow (Double)...YZ
B-L..	SeU...	4	4.98	2-‡Spi...	Own.....YZ	Wo	½F.	5.20	I-Rw..	Mec...	Dir...	594	I-Rw..	††	48–3½	60–4	M....	Own...	Ross.	C&L..	72	24	Budd..	4	D-P...	Yellow (Single)...YZ
B-L..	Eng...	4	5.35	3-Spi....	Own.....Y	SB..	½F.	4.27	I-Rw..	A-P...	Dir...	304	I-Rw..	††	46–3½	60–3½	M....	Own...	Ross.	C&L..	64	.....	Budd..	4	D-P...	Yellow.....Y
**	**	1	11.0	2-Spi....	Own.....YZ	Wo	½F.	11.00	I-Rw..	Mec...	Dir...	304	I-Rw..	297	48–3½	60–4	R....	Own...	Ross.	C&L..	72	22	Day...	4	S-C...	Yellow**.....Z-6
B-L..	Eng...	4	4.84	3-Spi....	Own.....X	SB..	½F.	5.38	E-Rw..	Hyd...	Dir...	††	I-Rw..	††	42½–3	60–3	M....	Own...	Ross.	C&L..	58	.....	Budd..	4	D-P...	Yellow Coach.....X

I-Rw—Internal Rear wheel.
Jac—Jacox.
L—L Head.
L-N—Leece Neville.
Lyc—Lycoming.
M—Magneto. [Ignition]
M—Metal (Shackles).
MDD—Multiple Dry Disk.
M&E—Merchant & Evans.
Mec—Mechanical.
Mich—Michigan
M.M.—Mechanics Machine.
Mot—Motor Wheel.
N-E—North East.
N-P—No Provision.
Opt—Optional.

P—Pneumatic (Tires).
P—Pressure (Fuel Feed).
Pet—Peters.
Pic—Pick.
Pie—Pierce.
Pow—Power Operated.
PrCs—Pressure to all crankshaft and connecting rod bearings; splash to other parts.
PrCk—Pressure to all camshaft conaecting rod and camshaft beerings; splash to other parts,
Pre—Prestolite.
R—Rubber.
RA—Wheels Swung from Radius Arms.

RBos—Robert Bosch.
RwDs—Rear wheels & drive shaft.
S—Solid.
SB—Spiral Bevel.
S-C—Spoked Cast Steel.
Sch—Schebler.
SeU—Separate Unit.
She—Sheldon.
Shu—Shuler.
S&L—Screw and Lever.
Sl—Sleeve Valve.
Smi—Smith.
S&N—Screw and Nut.
Sne—Snead.
SP—Single Plate.
S-P—Spoked Pressed Steel.

Spi—Spicer
Spl—Splitdorf.
SpPr—Pressure to main crankshaft bearings only. Splash to other parts.
Stew—Stewart.
Str—Stromberg.
Su—Suction.
S-W—Spoked Wood.
T—T Head.
TB—Straight Bevel.
Tim—Timken.
Uni—Universal Machine.
Un FA—Unit with Front Axle
U-P—Universal Products.

V—Vacuum.
Vac—Vacuum.
Var—Various.
Ves—Vesta.
War—Warner Corp.
Wauk—Waukesha.
Wes—Westinghouse.
Wil—Willard.
Wisc—Wisconsin.
Wo—Worm.
W&R—Worm & Roller.
W&S—Worm and Sector
W&W—Worm & Wheel.
Yell—Yellow Sleeve.
Zen—Zenith.

Specifications

TRANSMISSION							RUNNING GEAR													MAKE AND MODEL
Clutch		Gearset			Universal Joints		Rear Axle						Brakes				Steering Gear					
Make	Type	Make	Location	No. of Forward Speeds	Number and Make	Type	Make	Type	Final Drive	Gear Ratio	Propulsion Taken By	Torque Taken By	Type and Location: Foot	Type and Location: Hand	Schackles Type	Front Axle Make	Make	Type	Chassis Lubrication	Length of Rear Spring (Ins.)	Wheels, Type	Frame Make	
Fuller..	S P.....	Fuller..	Eng...	3	2-Blood..	m....	Col...	FF....	S B...	4.50	Sp....	Sp....	Ext-Rw...	Ext-Ds..	m..	Col...	Gem..	W & S..	P G..	55½	D.	Smith..	Bauer.....
Fuller..	M D D...	Fuller..	Eng...	3	2-Blood..	m....	Col...	¾ F..	S B...	5.12	Sp....	Sp....	Ext-Rw...	Ext-Ds..	m..	Col...	Gem..	W & G..	P G..	57⅜	D.	P & B..	Checker.....F
Fuller..	M D D...	Fuller..	Eng...	3	2-Cle....	m....	Col...	¾ F..	S B...	5.12	Sp....	Sp....	Ext-Rw...	Ext-Ds..	r..	Col...	Jones..	W & N..	P G..	59½	D.	P & B..	Checker.....G4
Fuller..	M D D...	Fuller..	Eng...	3	2-Cle....	m....	Col...	¾ F..	S B...	5.12	Sp....	Sp....	Ext-Rw...	Ext-Ds..	r..	Col...	Jones..	W & N..	P G..	59½	D.	P & B..	Checker.....G6
Own....	M D D....	Own...	Eng...	3	-Own..	m....	Own...	½ F..	S B...	4.17	Sp....	TT....	Ext-Rw...	Int-Rw..	m..	Own...	Gem..	W & S..	P G..	55	D.	Smith..	Dodge Brothers.....
Fuller..	M D D...	Fuller..	Eng...	3	2-Spicer	m....	Own...	¾ F..			Sp....	Sp....	Ext-Rw...	Int-Rw..	m..	Sal...	Lav..	W & W..				Own	Driggs.....
Long....	M D D...	War G	Eng...	3	2-Spicer	m....	Sal...	½ F..	S B...	4.70	Sp....	Sp....	Ext-Rw...	Ext-Ds..	m..	Sal...	Ross..	C & L..	Bowen	58	O.	P & B..	Elcar.....8-81
B & B..	S P	Det...	Eng...	3	2-Spicer	m....	Sal...	½ F..	S B...	5.1	Sp....	Sp....	Ext-Fw...	Ext-Ds..	m..	Sal...	Ross..	C & L..	P G..	56⅛	C.	Mid....	Gotfredson.....24 T
B & B..	S P.....	War G	Eng...	3	2-Mech.	m....	Own...	¾ F..	S B...		Sp....	Sp....	Int-Rw...	Ext-Ds..	m..	Own...	Ross..	C & L..	P G..		D.		H. C. S.....5
Fuller..	M D D...	Fuller..	Eng...	3	2-Spicer	m....	Col...	¾ F..	S B...	4.5	Sp....	Sp....	Ext-Rw...	Ext-Ds..	m..	Col...	Ross..	C & L..	P G..	58	D.	Hyd....	Luxor.....L
Fuller..	M D D...	Fuller..	Eng...	3	2-Spicer	m....	Col...	FF....	S B...	4.9	Sp....	Sp....	Ext-Rw...	Ext-Ds..	m..	Col...	Ross..	C & L..	CR..	61	A.	Hyd....	Majestic.....S-D
Fuller..	.....	Fuller..	Eng...	3	2-Spicer	m....	Col...	F F....	S B...	5.12	Sp....	Sp....	Ext-Rw...	Ext-Ds..	m..	Col...	Ross..	C & L..	.....	.....	D.		Moller (Astor).....
Own....	SP.....	Mun...	Eng...	3	2-Mech.	m....	Own...	½ F..	S B...	4.73	Sp....	Sp....	Ext-Fw...	Ext-Ds..	m..	Own...	Jacox..	S & N..	P G..	52	A.	Smith..	Oakland.....6
Fuller..	M D D...	Fuller..	Eng...	3	2-Blood..	m....	Col...	¾ F..	S B...	4.87	Sp....	Sp....	Ext-Rw...	Int-Rw..	m..	Col...	Jones..	S & N..	P G..	57	D.	Savage..	Pennant.....
Fuller..	M D D...	Fuller..	Eng...	3	2-Pick..	f....	Col...	¾ F..	S B...	4.50	Sp....	Sp....	Ext-Rw...	Ext-Ds..	r..	Col...	Ross..	C & L..	P G..	59⅛	D.	P & B..	Premier.....4F
Detlaff..	M D D...	Det...	Eng...	3	2-Spicer	m....	Sta...	½ F..	S B...	5.10	Sp....	Sp....	Ext-Rw...	Ext-Ds..	m..	Sta...	Gem..	W & W..	P G..	59½	D.	P & B..	Rauch & Lang.....T
Own....	M D D...	Own...	SeU...	3	-Own..	m-f..	Own...	½ F..	S B...	4.70	Sp....	T A...	Ext-Rw...	Int-Rw..	m..	Own...	Own...		P G..		D.	Own....	Reo.....V-4
Own....	M D D...	Own...	SeU...	3	3-Own..	f-m..	Own...	½ F..	S B...	4.70	Sp....	T A...	Ext-Rw...	Int-Rw..	m..	Own...	Own...	B P S..	P G..		D.	Own....	Reo.....V-6
Jones....	S P.....	Jones..	Eng...	3	2-Mech.	m....	Tim...	½ F..	S B...	4.9	Sp....	Sp....	Ext-Fw...	Ext-Ds..	m..	Sal...	Ross..	C & L..	P G..	60	O.	Hyd....	Roamer.....8-88
B & B..	S P.....	WarG.	Eng...	3	2-Mech.	m....	Sal...	¾ F..	S B...	4.7	Sp....	Sp....	Ext-Rw...	Ext-Ds..	m..	Sal...	Ross..	C & L..	P G..	51	D.	P & B..	Royal Martel.....
Own....	M D D...	Own...	Eng...	3	2-Mech.	m....	Own...	¾ F..	S B...	4.12	Sp....	Sp....	Ext-Rw...	Int-Rw..	m..	Own...	Own...		P G..			Own....	Willys-Knight...GHF
B-L....	M D O..	B-L..	Eng...	3	1-Spicer	m....	Tim...	½ F..	S B...	°4.9	Sp....	Sp....	Ext-Rw...	Ext-Ds..	r..	Tim...	Ross..	C & L..	P G..	56¾	D.	P & B..	Yellow.....05

M—Magneto
m—Metal
Mech—Mechanics Machine Co.
MDD—Multiple Dry Disc
MDO—Multiple Disc in Oil
Mid—Midland
Mun—Muncie
N-E—North East
O—Optional

P&B—Parish & Bingham
P G—PressureGun
PrCs—Pressure to all Crankshaft and connecting rod bearings, splash to other parts
PrCk—Pressure to main, connecting rod and camshaft bearings, splash to others
Pist—Piston

r—rubber
RBos—Robert Bosch
S—Sleeve Type
Sal—Salisbury
S B—Spiral Bevel
SeU—Separate Unit
Sil—Silicon Chromium
S&N—Screws and Nut
Sp—Springs

S P—Single Plate
Sp Pr—Pressure to main crankshaft bearings only, splash to connecting rods and other parts
S S—Semi Steel
Sta—Standard
T A—Torque Arm
Th S—Thermo Siphon

Tim—Timken
TT—Torque Tube
Vac—Vacuum
WarG—Warner Gear
West—Westinghouse
W & G—Worm and Gear
W & N—Worm and Nut
W & S—Worm and Sector
W & W—Worm and Wheel

Prices and Weights of Current Passenger Car Models

SHIP WT.	PASS.	BODY STYLE.	PRICE
AUBURN			
		"6-66"	
.....	2-p	Roadster	$1,095
.....	5-p	Touring	1,145
3040	5-p	Sport Sedan	1,195
3080	5-p	Sedan	1,295
3040	5-p	Wanderer Se'n	1,345
		"8-77"	
.....	2-p	Roadster	$1,395
.....	5-p	Touring	1,445
3350	5-p	Brougham	1,495
3390	5-p	Sedan	1,695
3390	5-p	Wanderer Se'n	1,745
		"8-88"	
		(129 in. W. B.)	
3180	4-p	Sp. Roadster	$1,995
3200	5-p	Touring	2,045
.....	7-p	Touring	2,295
3380	5-p	Sport Sedan	2,095
3450	5-p	Sedan	2,195
3450	5-p	Wanderer	2,245
		(146 in. W. B.)	
4200	7-p	Sedan	$2,595
BUICK		**"115"**	
2845	2-4-p	Roadster	$1,195
2955	5-p	Touring	1,225
3020	2-4-p	Coupe	1,195
3150	5-p	2d. Sedan	1,195
3110	4-p	Coupe	1,275
3230	5-p	4d. Sedan	1,295
.....	5-p	**Town Bro'm**	1,375
		"129"	
		(120 in. W. B.)	
3800	4-p	Coupe	$1,465
3670	5-p	2d. Sedan	1,395
3765	5-p	4d. Sedan	1,495
		"128"	
		(128 in. W. B.)	
3570	4-p	Sp. Roadster	$1,495
3635	5-p	Sp. Touring	1,525
3805	4-p	Country Club	1,765
.....	5-p	Coupe	1,850
.....	3-5-p	**Conv't Coupe**	1,925
3940	5-p	Brough. Sedan	1,925
4025	7-p	Sedan	1,995
CADILLAC			
		"314" Standard Line	
		(132 in. W. B.)	
4170	5-p	Brougham	$2,995
4105	2-p	Coupe	3,100
4190	5-p	Victoria	3,195
4270	5-p	Sedan	3,250
4460	2-p	Sport Coupe	3,500
4590	5-p	Sport Sedan	3,650
		(138 in. W. B.)	
4420	7-p	Sedan	$3,400
4480	7-p	Imperial	3,535
		Custom Built	
		(132 in.)	
4220	2-p	Roadster	$3,350
4300	2-p	Conv't Coupe	3,450
		(138 in. W. B.)	
4285	7-p	Touring	$3,450
4275	5-p	Phaeton	3,450
4705	5-p	Sp. Phaeton	3,975
4465	5-p	Coupe	3,855
4465	5-p	Sedan	3,995
4680	7-p	Suburban	4,125
4615	7-p	Imperial	4,350
CASE		**J. I. C.**	
3290	5-p	Touring	$1,885
3640	5-p	Sedan	2,590
		"V"	
3950	7-p	Touring	$2,225
CHANDLER Big Six			
3200	2-4-p	Roadster	$1,695
3330	5-p	Touring	1,545
3345	7-p	Touring	1,645
3570	5-p	20th C'y Sedan	1,495
3570	5-p	Met. Sedan	1,595
3485	4-p	Coupe	1,675
3570	5-p	De Luxe Sedan	1,695
3725	7-p	Sedan	1,895
		Standard Six	
		(108½ in. W. B.)	
2475	5-p	Touring	$ 945
2565	5-p	De Luxe Tour.	1,005
2470	2-4-p	Sport R'dster	1,135
2685	5-p	Sedan	995
2620	2-p	Coupe	1,035
2685	5-p	De Luxe Sedan	1,095
2620	2-p	De Luxe Coupe	1,125
		Special Six	
		(115 in. W. B.)	
2890	5-p	Touring	$1,145
2940	5-p	Sport Touring	1,295
2995	2-p	Coupe	1,195
2995	2-p	De Luxe Coupe	1,285
3230	5-p	Sedan	1,295
		"Royal Str. 8"	
.....	5-p	Touring	$2,050
.....	7-p	Touring	2,195
.....	.....	Roadster	2,195
.....	4-p	Coupe	2,195
.....	5-p	Sedan	2,195
.....	7-p	Sedan	2,295

SHIP WT.	PASS.	BODY STYLE.	PRICE
CHEVROLET "V"			
1785	2-p	Roadster	$ 525
1865	5-p	Touring	525
2005	2-p	Utility Coupe	625
2110	5-p	Coach	595
2185	5-p	Sedan	695
.....	2-4p	Cabriolet	715
2185	5-p	Landau Sedan	745
CHRYSLER			
		"50"	
2145	5-p	Touring	$ 750
2025	2-p	Roadster	750
2130	2-4-p	Roadster	795
2230	2-p	Coupe	750
2335	5-p	Coach	780
2410	5-p	Sedan	830
2350	5-p	Landau Sedan	885
		"60"	
2570	5-p	Touring	$1,075
2545	2-p	Roadster	1,145
2605	2-4-p	Roadster	1,175
2720	2-p	Coupe	1,125
.....	3-5-p	Coupe	1,245
2795	5-p	Coach‡	1,145
2835	5-p	Sedan	1,245
		"70"	
2845	2-4-p	Roadster	$1,495
2930	5-p	Phaeton	1,395
2905	5-p	Sp. Phaeton	1,495
.....	4-p	Coupe	1,595
3000	2-4-p	Royal Coupe	1,545
3090	5-p	Brougham	1,525
3150	5-p	Royal Sedan	1,595
2935	2-4-p	Cabriolet	1,745
3160	5-p	Crown Sedan	1,795
		"80"	
		(185½ in.*)	
3925	5-p	Phaeton	$2,495
3805	2-4-p	Roadster	2,595
4220	5-p	Coupe	3,095
.....	5-p	Sedan	2,675
4260	5-p	Sedan	3,095
		(192½ in.*)	
4090	4-p	Coupe	$2,895
4065	2-p	Cabriolet	3,495
		(198½ in.*)	
.....	5-p	Sportif	$4,000
4450	7-p	Sedan	3,295
4260	7-p	Sedan Lim.	3,595
4265	5-p	Town Car	5,495

‡Cloth Upholstery. Leather at extra cost.
*Overall length.

SHIP WT.	PASS.	BODY STYLE.	PRICE
CUNNINGHAM			
		"V-7"	
4500	4-p	Sp. Touring	$6,150
4600	7-p	Touring	6,650
4700	4-p	Coupe	7,600
5000	6-p	Limousine	8,100
DAGMAR		**"6-70"**	
3750	4-p	Roadster	$3,500
3800	4-p	Sp. Tourer	3,500
3700	4-p	Phaeton	3,500
4200	4-p	Petite Coupe	4,500
4200	4-p	Petite Sedan	4,500
4500	4-p	De Luxe Coupe	4,750
4700	5-p	Sedan	4,700
4800	7-p	Sedan	4,750
		"6-60"	
3150	5-p	Touring	$1,785
3100	2-p	Roadster	1,985
3200	4-p	Sp. Touring	1,985
3500	5-p	Sedan	2,445
DAVIS			
		"92-27"	
2915	5-p	Legion. Tour.	$1,395
3000	5-p	Sedan	1,595
3055	5-p	Imperial Sedan	1,795
		"94-27"	
2350	5-p	Roadster	$1,245
2500	5-p	Touring	1,285
2570	5-p	Sedan	1,285
2375	3-p	Coupe	1,285
.....	5-p	Imp. Sedan	1,385
DIANA "St. 8"			
2995	5-p	Roadster	$1,795
2995	5-p	Palm Bch. Rds.	1,995
.....	7-p	Touring	1,995
3170	5-p	DeL. Bro'm	1,995
3275	5-p	De Luxe Sedan	2,195
3160	5-p	Cabriolet	2,095
3640	7-p	Sedan (135 in. W. B.)	2,695
3640	7-p	Berline Sedan	2,895
3640	5-p	Town Car	5,000
DODGE BROTHERS			
2448	2-p	Roadster	$ 795
2541	2-p	Spec'l Roadster	845
2584	5-p	Touring	795
2669	5-p	Spec. Touring	845
2604	2-4-p	Sport Roadster	945
2653	5-p	Sport Touring	880
2658	2-p	Coupe	845
2672	2-p	Spec. Coupe	895
2816	5-p	Sedan	895
2893	5-p	Spec. Sedan	945
2912	5-p	DeL. Sedan	1,075

SHIP WT.	PASS.	BODY STYLE.	PRICE
DU PONT			
		"E"	
3700	4-p	Roadster	$2,800
3850	5-p	Touring	2,800
3850	4-p	Coupe	3,200
4100	5-p	Sedan	3,400
.....	5-p	Conv't. Sedan	3,750
ELCAR			
		"6-70"	
2580	4-p	Lan. Rdster	$1,475
2670	5-p	Brougham	1,295
2750	5-p	Sedan	1,395
		"8-82"	
3320	2-4-p	Land. R'dster	$1,870
3410	5-p	Brougham	1,595
3490	5-p	Sedan	1,790
		"8-90"	
3675	7-p	Touring	$2,265
3620	2-4-p	Land. R'dster	2,295
.....	2-4-p	Roadster	2,315
3710	5-p	Brougham	2,195
3895	5-p	Sedan	2,465
4245	7-p	Sedan	2,765
ERSKINE			
		"6"	
.....	5-p	Tourer	$ 935
.....	2-p	Coupe	935
.....	5-p	Sedan	985
.....	2-4-p	Cust. Coupe	985
ESSEX			
		"Six"	
2260	4-p	Speedster	$ 750
.....	2-p	Speedster	.....
2500	5-p	Coach	695
.....	2-p	Coupe	735
2540	5-p	Sedan 4d.	785
2540	5-p	DeL. Sedan	795
FLINT			
		"Z-18"	
2525	5-p	Coach	$ 960
2580	5-p	DeL. Coach	1,075
		"60"	
2745	4-p	Roadster	$1,360
2750	5-p	Touring	1,260
2885	4-p	Sp. Roadster	1,495
2890	4-p	Coupe R'dster	1,495
3030	5-p	Sedan 4d.	1,495
3010	5-p	Brougham	1,450
		"80"	
		(120 in. W. B.)	
3335	4-p	Roadster	$1,645
3245	5-p	Touring	1,450
3395	4-p	Sp. Touring	1,645
3500	4-p	Coupe	1,850
3625	5-p	Sedan	1,925
		(130 in. W. B.)	
3780	7-p	Sedan	$2,125
FORD			
		"T"	
1655	2-p	Runabout	$ 360
1728	5-p	Touring	380
1860	2-p	Coupe	485
1972	5-p	Tudor Sedan	495
2004	5-p	Fordor Sedan	545
FRANKLIN			
		"11"	
2800	3-p	Sport Road.	$2,690
2845	5-p	Touring	2,635
2965	3-p	Coupe	2,490
3150	3-5-p	Coupe	2,565
3175	5-p	Sedan	2,790
3165	4-p	Victoria	2,740
3230	5-7-p	Sedan	2,840
3230	5-p	Oxford Sedan	2,815
3275	7-p	Limousine	2,940
.....	.....	Collap. Coupe	2,900
.....	.....	Tandem Sport	3,190
GARDNER			
		6B	
.....	5-p	Sedan	$1,695
		"80"	
.....	2-4-p	Roadster	$1,395
3350	5-p	Sedan	1,695
		"90"	
3450	2-4-p	Roadster	$1,995
3690	5-p	Brougham	2,295
3720	5-p	Sedan	2,295
3690	5-p	Victoria	2,295
HERTZ			
		"D-1"	
3587	5-p	Touring	$1,495
3720	5-p	Sedan	1,795
HUDSON			
		"Std. Line"	
3440	5-p	Coach	$1,285
.....	5-p	Sedan	1,385

SHIP WT.	PASS.	BODY STYLE.	PRICE
		"Custombuilt"	
3395	7-p	Phaeton	$1,500
.....	.....	Roadster	.....
3560	4-p	Brougham	1,575
3685	7-p	Sedan	1,850
.....	5-p	Sedan	1,750
HUPMOBILE			
		"A-1"	
2620	5-p	Touring	$1,325
.....	2-4-p	Roadster	1,385
2800	5-p	Sedan	1,385
2800	2-4-p	Coupe	1,385
2850	5-p	Brougham	1,385
		"E-3"	
3300	5-p	Touring	$1,945
3360	7-p	Touring	2,045
3355	2-4-p	Roadster	2,045
3465	2-4-p	Coupe	2,345
3515	5-p	Brougham	2,245
3545	5-p	Sedan	2,345
3525	5-p	Victoria	2,345
3360	7-p	Sedan	2,495
3360	7-p	Sedan Lim.	2,595
JORDAN			
		"6"	
.....	4-p	Sport Salon	$1,595
.....	2-p	Playboy	1,595
.....	5-p	Sedan	1,595
		"J-1"	
2915	4-p	Playboy Road.	$1,845
3200	5-p	Sedan	1,945
3200	4-p	Victoria	1,945
3200	2-4-p	Sport. Coupe	2,195
3200	4-p	Cus. Victoria	2,195
3200	5-p	Cus. Sedan	2,195
		Series "AA"	
3470	5-p	Cus. Sedan	$2,495
3470	4-p	Cus. Victoria	2,495
KISSEL			
		"6-55"	
		(124 in. W. B.)	
3030	5-p	Phaeton	$1,685
3160	4-p	Speedster	1,895
.....	4-p	Coupe R'dster	1,895
3300	5-p	Brougham	1,695
.....	5-p	Spec. Bro'm	1,795
3440	5-p	Bro'm Sedan	1,895
.....	5-p	Conv't Bro'm	2,295
		(131 in. W. B.)	
3660	7-p	Touring	$1,785
3225	4-p	Tourster	1,895
.....	5-p	Spec. Bro'm Sedan	2,095
.....	7-p	Sedan	2,295
		"8-65"	
		(125 in. W. B.)	
.....	5-p	Phaeton	$1,885
.....	4-p	Speedster	2,095
.....	4-p	Coupe R'dster	2,095
.....	5-p	Brougham	1,895
.....	5-p	Spec. Bro'm	1,995
.....	5-p	Bro'm Sedan	2,095
.....	5-p	Conv't Bro'm	2,495
		(132 in. W. B.)	
.....	7-p	Touring	$1,985
.....	4-p	Tourster	2,095
.....	5-p	Spec. Bro'm Sedan	2,295
.....	7-p	Sedan	2,495
		"8-75"	
		(131 in. W. B.)	
3220	5-p	Phaeton	$2,185
3360	4-p	Speedster	2,395
.....	4-p	Coupe R'dster	2,395
3565	5-p	Brougham	2,195
.....	5-p	Spec. Bro'm	2,295
3760	5-p	Bro'm Sedan	2,395
.....	5-p	Conv't Bro'm	2,795
.....	7-p	Sedan	2,795
		(139 in. W. B.)	
3630	7-p	Touring	$2,285
3335	4-p	Tourster	2,395
.....	5-p	Spec. Bro'm Sedan	2,595
3910	5-p	Bro'm Sed. De Luxe	2,985
4080	7-p	Sedan De Luxe	3,495
4125	7-p	Ber. Sed. DeL.	3,585
LINCOLN "8"			
4760	2-p	Sport R'dster	$4,700
4810	7-p	Sport Touring	4,700
4880	4-p	Sport Phaeton	4,700
4610	4-p	Coupe	4,800
4885	4-p	Sedan	5,000
4760	5-p	Sedan	5,100
4890	7-p	Sedan	5,300
4945	7-p	Limousine	5,500
LOCOMOBILE			
		"8-66"	
3055	5-p	Touring	$1,785
3035	4-p	Roadster	1,895
3335	5-p	Sedan	1,895
3330	5-p	Brougham	1,895
.....	5-p	Brougham DeL.	2,550
		"8-80"	
.....	51p	Sedan	$2,850

Prices and Weights of Current Passenger Car Models

SHIP WT.	PASS.	BODY STYLE.	PRICE
LOCOMOBILE—Continued			
"90"			
4475	4-p	Sportif	$5,900
4270	4-p	Roadster	5,900
4630	4-p	Victoria Coupe	6,950
4842	5-p	Victoria Sedan	7,300
4615	7-p	Cabriolet	7,500
4930	7-p	Suburban	7,500
4615	7-p	Brougham	7,500
"48"			
5020	4-p	Sportif	$7,460
5320	7-p	Touring	7,460
5640	7-p	Touring Lim.	9,500
5600	5-p	Victoria Sed.	10,050
5464	6-p	Brougham	10,040
5868	7-p	Enc. Dr. Lim.	10,050
5624	7-p	Cabriolet	10,300
McFARLAN			
"TV"			
4000	2-p	Roadster	$5,800
4600	4-p	Sp. Touring	5,600
4900	4-p	Coupe	6,720
5200	4-p	Tour. Sedan	6,720
5200	7-p	Tour. Sedan	6,810
.....	6-p	Sedan	6,720
.....	7-p	Sedan	6,810
.....	7-p	Spec. Sedan	6,810
.....	7-p	Enc. Sedan	7,110
.....	7-p	Sub. Sedan	7,110
5200	7-p	Town Car	9,000
"Straight 8"			
3400	5-p	Touring	2,650
3450	7-p	Touring	2,750
3400	4-p	Roadster	3,050
3650	5-p	Sedan	3,180
3650	5-p	Sub. Sedan	3,380
3700	7-p	Sedan	3,280
3700	7-p	Sub. Sedan	3,480
3650	4-p	Coupe	3,180
3650	5-p	Coach Brough.	3,180
3750	5-p	Town Car	4,600
MARMON			
"Little Marmon"			
.....	2-p	Speedster	$1,895
.....	4-p	Speedster	1,965
.....	2-p	Conv't Coupe	1,995
.....	2-p	Coupe	1,895
.....	5-p	Sedan 2d.	1,795
.....	5-p	Sedan 4d.	1,895
.....	4-p	Brougham	1,895
"E-75"			
4251	2-p	Speedster	$3,485
4256	4-p	Speedster	3,485
4017	5-p	Phaeton	3,485
.....	7-p	Tour. Speedster	3,565
.....	2-p	Coupe R'dster	3,565
4452	5-p	Town Coupe	3,195
4373	2-p	Coupe	3,485
4346	4-p	Victoria	3,485
4525	5-p	Brougham	3,565
4493	5-p	Sedan	3,565
4620	7-p	Sedan	3,640
.....	5-p	Custom Sedan	3,960
4678	7-p	Custom Sedan	4,075
.....	7-p	Custom Lim.	4,175
MOON			
"6-60"			
2295	2-5-p	Roadster	$ 995
2320	2-5-p	DeL. Roadster	1,095
2340	5-p	Phaeton	995
2420	5-p	Coach	1,045
2520	.....	Std. Brough.	1,145
2575	.....	Cab. Roadster	1,195
2520	.....	Royal Bro'm	1,195
2605	.....	4d. Sedan	1,245
2605	5-p	Royal Sedan	1,295
Series "A"			
2600	5-p	Roadster	$1,395
2560	5-p	Touring	1,195
2720	5-p	Cab. Roadster	1,595
2710	5-p	DeL. Bro'm	1,395
2860	5-p	DeL. Sedan 4d.	1,545
NASH			
"Light Six"			
2275	5-p	Touring	$ 865
2310	2-p	Coupe	925
2440	5-p	Sedan	925
2475	5-p	Sedan	995
.....	5-p	De Luxe Sedan	1,085
"Special Six"			
2900	2-p	Roadster	$1,115
2980	5-p	Touring	1,135
2980	4-p	Roadster	1,225
3030	2-p	Business Coupe	1,165
3150	5-p	Sedan 2d.	1,215
3170	5-p	Sedan	1,315
.....	5-p	Caval. Sed.	1,695
"Advanced Six" (121 in. W. B.)			
3290	4-p	Roadster	$1,475
3400	5-p	Touring	1,340
3550	5-p	Sedan 2d.	1,425
3650	5-p	Sedan	1,525
(127 in. W. B.)			
3480	7-p	Touring	$1,490
3640	4-p	Victoria	1,790
3750	5-p	Coupe	1,990
.....	5-p	Amb. Sed.	2,090
3830	7-p	Sedan	2,090

SHIP WT.	PASS.	BODY STYLE.	PRICE
OAKLAND		**"6"**	
2500	5-p	Touring	$1,025
2590	4-p	Sp. Roadster	1,175
2620	5-p	Sp. Phaeton	1,095
2745	5-p	2d. Sedan	1,095
2705	3-p	Landau Coupe	1,125
2855	5-p	4d. Sedan	1,195
2885	5-p	Landau Sedan	1,295
OLDSMOBILE		**"30E"**	
2335	5-p	Touring	$ 875
2490	5-p	Sp. Touring	980
2317	4-p	DeL. Roadster	975
2450	2-p	Coupe	925
2570	5-p	Coach	950
2538	2-p	DeLuxe Coupe	990
2720	5-p	DeLuxe Coach	1,050
2625	5-p	Sedan	1,025
2780	5-p	DeLuxe Sedan	1,125
2780	5-p	Landau	1,190
OVERLAND		**"(4) Whippet"**	
1985	.....	Touring	$ 625
.....	2-p	Roadster	695
2130	2-p	Coupe	625
2075	5-p	Coach	625
.....	5-p	Sedan	725
.....	.....	Landau	755
		"(6) Whippet"	
.....	5-p	Touring	$ 765
.....	2-4-p	Roadster	825
.....	2-p	Coupe	795
.....	5-p	Coach	795
.....	5-p	Sedan	875
.....	5-p	Landau	925
PACKARD		**"6"**	
3545	4-p	Roadster	$2,685
3590	5-p	Phaeton	2,585
3925	4-p	Coupe	2,685
3925	5-p	Sedan	2,585
(133 in. W. B.)			
3790	7-p	Touring	$2,785
4070	7-p	Sedan	2,785
4015	5-p	Club Sedan	2,725
4130	7-p	Sedan Lim.	2,885
"8"			
(136 in. W. B.)			
4110	4-p	Runabout	$3,850
4130	5-p	Phaeton	3,750
4475	4-p	Coupe	4,750
4430	5-p	Sedan	4,750
(143 in. W. B.)			
4250	7-p	Touring	$3,950
4550	5-p	Club Sedan	4,890
4660	7-p	Sedan	5,000
4700	7-p	Sedan Lim.	5,100
PAIGE		**"6-45"**	
.....	5-p	Touring	$1,150
2660	5-p	Brougham	1,095
.....	.....	Coupe	1,095
2760	5-p	Sedan	1,195
.....	.....	Cabriolet	1,295
"6-75"			
(125 in. W. B.)			
3420	7-p	Touring	$1,655
3540	4-p	Cab Roadster	1,995
3550	5-p	Sedan	1,695
3550	4-p	Coupe	1,995
3765	7-p	Sedan	1,995
3805	7-p	Limousine	2,145
"6-65"			
(115 in. W. B.)			
.....	4-p	Roadster	$1,495
3215	5-p	Brougham	1,395
3115	5-p	Landau Bro'm	1,395
3280	5-p	Sedan	1,495
"8-85"			
.....	7-p	Touring	$2,295
.....	5-p	Sedan	2,355
.....	7-p	Sedan	2,655
.....	4-p	Cabriolet	2,655
.....	4-p	Coupe	2,655
.....	7-p	Limousine	2,795
PEERLESS			
"6-60"			
.....	5-p	Sedan	$1,345
"6-72"			
(126½ in. W. B.)			
3625	5-p	Coupe	$2,295
3680	5-p	Sedan	2,395
(133½ in. W. B.)			
3475	2-4-p	Sp. Roadster	$2,195
3400	.....	Phaeton	1,995
3800	7-p	Sedan	2,595
3825	7-p	Limousine	2,695
3575	5-p	DeLuxe Sedan	2,795
3650	7-p	DeLuxe Sedan	2,995
"6-80"			
2950	5-p	Phaeton	$1,395
3025	2-4-p	Roadster	1,495
.....	2-4-p	Coupe Roadster	1,565
3120	2-4-p	Coupe	1,565
3100	5-p	Sedan 2d.	1,395
3290	5-p	Std. Sedan	1,595
.....	.....	Sport Sedan	1,795
3140	5-p	DeLuxe Sedan	1,795

SHIP WT.	PASS.	BODY STYLE.	PRICE
"6-90"			
.....	5-p	Phaeton	$1,695
.....	2-4-p	Sport R'dster	1,695
3260	4-p	Coupe	1,725
.....	4-p	Sedan	1,895
3410	5-p	Sedan	1,895
3460	5-p	Landaulet	1,995
"8-69"			
(133½ in. W. B.)			
3850	2-4-p	Roadster	$2,995
.....	7-p	Sedan	3,095
4125	5-p	Sedan	3,495
4200	7-p	Sedan	3,595
4275	5-p	Ber. Limousine	3,795
(126 in. W. B.)			
.....	5-p	Coupe	$2,795
4050	5-p	Sedan	2,995
PIERCE-ARROW		**"80"**	
3285	2-p	Runabout	$2,895
3300	4-p	Phaeton	3,095
3440	7-p	Phaeton	2,895
3470	5-p	Coach 2d.	2,995
3405	2-p	Coupe	3,100
3525	5-p	Coach 4d.	3,250
3620	7-p	Coach	3,350
3420	4-p	Coupe	3,695
3500	5-p	Sedan	3,895
3600	7-p	Sedan	3,995
3655	7-p	Enc. Dr. Lim.	4,045
3675	7-p	Lim. Coach	3,450
"36"			
4445	2-p	Runabout	$5,875
4480	4-p	Touring	5,875
4585	7-p	Touring	5,875
4760	3-p	Coupe	6,375
4800	4-p	Sedan	6,375
4760	7-p	Sedan	5,875
4770	4-p	Coupe Sedan	6,375
4840	7-p	Enclosed Lim.	5,875
4840	7-p	French Lim.	7,500
4840	7-p	Enc. Dr. Land.	6,000
4760	7-p	Sedan Landau	6,000
4880	4-p	Lim. Encl.	6,375
4800	4-p	Sedan Landau	6,600
4880	4-p	Encl. Landau	6,600
4740	7-p	French Landau	8,000
PONTIAC		**"Six"**	
2270	2-p	Coupe	$ 825
2335	5-p	2d. Sedan	825
2455	5-p	Landau Sedan	895
2420	2-p	DeLuxe Coupe	895
2565	5-p	DeL. Lan. Sed.	975
REO		**"A"**	
.....	2-p	Roadster	.....
.....	2-p	Coupe	$1,845
.....	4-p	Coupe	1,845
3700	.....	Sedan	1,845
.....	.....	Brougham	1,595
RICKENBACKER		**"6-70"**	
3125	5-p	Sedan	$1,595
3055	.....	Bro'm Vict.	1,645
"8-80"			
3240	5-p	Sedan	$1,795
3170	.....	Bro'm Vict.	1,845
"8-90"			
3760	5-p	Sedan	$2,595
3660	.....	Brom. Vict.	2,595
3800	7-p	Sedan	2,695
.....	7-p	Berline	2,795
ROAMER		**"8-78"**	
.....	4-p	Coupe	.....
.....	5-p	Brougham	.....
.....	5-p	Sedan	.....
"8-88"			
3310	2-p	Roadster	$1,895
3410	2-p	Coupe	1,985
3530	5-p	Sedan	1,985
ROLLS-ROYCE			
Manufacturers do not quote list prices.			
STAR		**"4"**	
1850	2-p	Conv't R'dster	$ 550
1905	5-p	Touring	550
1965	2-p	Coupe	650
2120	5-p	Coach	675
2190	5-p	Sedan 4d.	765
"6"			
2075	5-p	Touring	$ 725
2160	2-4-p	Sp. Roadster	885
2100	2-p	Coupe	795
2245	5-p	Coach	845
2355	5-p	Sedan	925
2365	5-p	Landau Sedan	975
2150	2-4-p	Sp. Coupe	975
STEARNS-KNIGHT		**"F 6-85"**	
4135	2-p	Roadster	$3,250
4285	4-p	Touring	3,250
4640	2-p	Cab-Roadster	3,550
4290	4-p	Coupe	3,350
4407	5-p	Std. Sedan	3,350
4505	7-p	Sedan	3,550
4650	5-p	Std.Sedan Lim.	3,550
4800	7-p	Sedan Lim.	3,750

SHIP WT.	PASS.	BODY STYLE.	PRICE
"G-8"			
4235	2-p	Roadster	.....
4325	4-p	Touring	.....
4457	4-p	Coupe	.....
4565	5-p	Sedan	.....
4555	7-p	Sedan	.....
4700	7-p	Limousine	.....
4850	5-p	Sedan Lim.	.....
.....	2-p	Cabriolet	.....
STUDEBAKER			
Standard Six			
2965	3-p	Du. Roadster	$1,160
3030	3-p	Sport Roadster	1,250
3095	5-p	Du. Phaeton	1,180
3140	3-p	Country Club	1,295
3210	5-p	Coach	1,230
3115	5-p	Sedan	1,330
3235	5-p	Custom Sedan	1,385
3180	4-p	Cus. Victoria	1,335
Special Six			
3480	2-4-p	Sp. Roadster	$1,630
3495	5-p	Du. Phaeton	1,480
3470	5-p	Coach	1,430
3620	5-p	Brougham	1,830
Big Six			
(120 in. W. B.)			
3445	3-p	Du. Roadster	$1,530
3485	2-4-p	Sport Roadster	1,680
3580	5-p	Sport Phaeton	1,610
3510	5-p	Club Coupe	1,480
3705	4-p	Cus. Victoria	1,735
3835	5-p	Custom-Bro'm	1,785
(127 in. W. B.)			
3720	7-p	Du. Phaeton	$1,810
3910	5-p	Brougham 4d.	2,130
4050	7-p	The President	2,245
STUTZ		**"AA"**	
(131 in. W. B.)			
4058	2-4-p	Speedster	$3,150
4175	4-p	Speedster	3,160
4334	5-p	Brougham	3,195
4340	5-p	Sedan	3,195
4176	4-p	Vic. Coupe	3,175
4182	2-4-p	Coupe	3,165
.....	5-p	Landau Sed.	3,345
(145 in. W. B.)			
.....	5-p	Tour. Bro'm	$3,685
4656	7-p	Sedan	3,685
4731	7-p	Sedan Lim.	3,785
"AA De Luxe"			
(131 in. W. B.)			
.....	2-p	DeL. Speedst'r	$3,250
.....	4-p	DeL. Speedst'r	3,260
.....	2-p	Coupe	3,265
.....	4-p	Vict. Coupe	3,275
.....	5-p	Brougham	3,320
.....	5-p	Sedan	3,320
.....	5-p	Landau Sed.	3,470
(145 in. W. B.)			
.....	5-p	Tour. Bro'm	$3,835
.....	7-p	Sedan	3,835
.....	7-p	Sed. Lim.	3,910
"AA Custom"			
.....	2-p	Coupe	$3,915
.....	4-p	Vict. Coupe	3,925
.....	5-p	Sedan	3,995
.....	2-4-p	Cab. Coupe	3,995
VELIE			
"Spec. 60"			
3025	5-p	Club Phaeton	$1,450
2908	4-p	Coupe	1,585
3175	5-p	Sedan	1,585
3340	5-p	Royal Sedan	1,585
"Std. 50"			
(112 in. W. B.)			
2850	3-p	Coupe	$1,045
2900	5-p	Sedan	1,045
WILLS SAINTE CLAIRE			
"T-6" (127 in. W. B.)			
3675	5-p	Traveler	$2,700
3580	4-p	Roadster	2,700
3750	4-p	Cab. Coupe	3,350
3900	5-p	Std. Sedan	3,150
3970	7-p	Sedan	3,250
4080	7-p	Limousine	3,350
WILLYS-KNIGHT		**"66-A"**	
3323	2-p	Roadster	$1,950
3395	5-p	Touring	1,850
3566	7-p	Touring	1,950
.....	2-4-p	Cab. Coupe	2,295
.....	4-p	Foursome Sed.	2,295
3686	5-p	Sedan	2,395
3822	7-p	Sedan	2,495
"70-A"			
2846	5-p	Touring	$1,295
.....	2-4-p	Roadster	1,350
.....	2-p	Coupe	1,295
2853	5-p	Sedan	1,395
.....	2-4-p	Cabriolet	1,395
3050	5-p	Sedan	1,495

Mechanical Specifications of Current Passenger Car Models

This list comprises cars distributed on a national basis

MAKE AND MODEL	Wheel Base (Inches)	Tire Size Decimals-Balloons	ENGINE: Make and Model	Number of Cyls., Bore and Stroke	Rated H.P. N.A.C.C.	Piston Displacement	Valve Arrangement	Camshaft Drive	Piston Material	No. Main Bear.	Crankshaft Vib'n Damper?	Oiling System	Oil Cleaner?	Cooling System	Thermostat?	Radiator Shutters?	Carburetor Make	Air Cleaner?	ELECTRICAL SYSTEM: Ignition System Make	Generator and Starter Make	Clutch—Type and Make	Gear Set—Make	Universals—Type and Make	REAR AXLE: Type and Make	Gear Ratio	BRAKES: Foot—Type and Location	Hand—Type and Location	4-Wheel Type—Optional	Steering Gear—Make	Rear Springs—Type and Length	Chassis Lubrication—Type and Make
Auburn.....6-66	120	29x5.25	Cont...28L	6-2⅞x4¾	19.8	185	L	Ch..	C I.	4	Y	PK.	N	Pu..	N	N	Sch...	N	Remy.	Remy.	P.Long.	War..	m-U-P..	½ Col...	4.9	B-F.	E-T	M	Ross	S-56¾	Pr-Al.
Auburn.....8-77	125	29x5.25	Lyc....GT	8-2⅜x4¾	24.2	226	L	Ch..	C I.	5	Y	PK.	N	Pu..	N	N	Sch...	N	Remy.	Remy.	P.Long..	War..	m-U-P..	½ Col...	4.7	B-F.	E-T	M	Ross.	S-56¾	Pr-Al.
Auburn.....8-88	129-146	31x6.00	Lyc..4HM	8-3¼x4½	33.8	299	L	Ch..	Al..	5	N	P C.	F	Pu..	Y	N	Sch...	N	Remy.	Remy.	D.Long..	W-G..	m-U-P..	½ Col...	4.45	B-F.	E-T	M	Ross.	S-57..	Pr-Dot
Buick.....115	114½	31x5.75	Own.....	6-3½x4½	23.4	207	I	He..	C I.	4	Y	P C.	F	Pu..	Y	N	Mar..	Y	D-R..	D-R..	D.Own..	Own..	m-Own..	¾ Own..	4.90	E-F.	I-R.	M	Jac...	V-48..	Pr-Ze.
Buick.....120 & 128	120-128	33x6.00	Own.....	6-3½x4¾	29.4	274	I	He..	C I.	4	Y	P C.	F	Pu..	Y	N	Mar..	Y	D-R..	D-R..	D.Own..	Own..	m-Own..	¾ Own..	4.7°	E-F.	I-R.	M	Jac...	V-47⅝	Pr-Ze.
Cadillac.....314	132-138	33x6.75	Own...314	8-3⅛x5⅛	31.2	314	L	Ch..	C I.	3	N	PK.	F	Pu..	Y	Y	Own..	N	D-R..	D-R..	D.Own..	Own..	m-Spi...	Fl Own..	4.91	B-F.	I-R.	M	Jac...	S-60..	Pr-Al..
Case.....Y	132	34x7.30	Con....6J	6-3¾x5	33.7	331	L	He..	C I.	4	N	P C.	N	Pu..	Y	N	Sch...	N	Delco.	Delco.	D.Own..	Own..	f-Sne....	¾ Col...	4.45	E-F.	E-T	H	Ross.	S-57..	Pr-Sa.
Case.....JIC	122	32x6.20	Con....8R	6-3⅜x4½	27.3	242	L	He..	C I.	4	N	P C.	N	Pu..	Y	N	Sch...	N	Delco.	Delco.	D.Own..	Own..	f-Sne....	½ Col...	4.90	E-F.	E-T	H	Ross.	S-54¾	Pr-Sa.
Chandler.....Big 6	124	33x6.00	Own..Big 6	6-3½x5	29.4	289	L	Ch..	C I.	4	Y	P F.	F	Pu..	Y	N	Sch...	Y	D-R..	D-R..	P.B&B..	Own..	f-Own...	¾ Own..	4.45	E-F.	E-T	M	Own..	S-59¼	Bowen
Chandler.....Stdd. 6	108½	30x4.75	Own.Stdd 6	6-3x4¼	21.6	180	L	Ch..	C I.	3	Y	P F.	F	Pu..	Y	N	Til...	Y	D-R..	D-R..	P.B&B..	Own..	f-Pick...	½ Own..	4.90	E-F.	E-T	M	Gem..	S-51..	Bowen
Chandler.....Spec. 6	115	31x5.25	Own..Spc. 6	6-3⅛x4¾	23.4	219	L	Ch..	C I.	3	Y	P F.	F	Pu..	Y	N	Sch...	Y	D-R..	D-R..	P.B&B..	Own..	f-Sne....	½ Own..	4.90	E-F.	E-T	M	CAS..	S-54..	Bowen
Chandler.... Royal St. 8	124	33x6.00	Own.....	8-3⅛x4¾	32.5	303	L	Ch..	CI..	5	Y	PK.	F	Pu..	Y	Y	Sch...	Y	D-R..	D-R..	P.B&B..	Own..	f-Own..	¾ Own	4.45	E-F.	E-T	M	Own..	S-59¼	Bowen
Chevrolet.....V	103	29x4.40	Own..Sup.	4-3 1/16x4	21.8	171	I	He..	C I.	3	....	P S.	F	Pu..	N	N	Car...	Y	Remy.	Remy.	P.Own..	Own..	m-Own..	½ Own..	3.82	E-R	I-R.	N	Own..	S-54..	Pr-Al..
Chrysler.....“80”	185-198½‡	30x6.75	Own.....	6-3½x5	29.4	288	L	Cb..	Al..	7	Y	P F.	Y	Pu..	Y	N	Str...	Y	Remy.	Remy.	P.G&H..	Own..	m-U-P..	½ Own.	4.18	E-F.	E-T	H	Ross..	S-58..	Pr-Ze
																									4.64						Ow...
Chrysler.....“50”	153‡	29x4.75	Own.....	4-3⅝x4⅛	21.0	170	L	He..	Al..	3	N	P C.	N	Th..	N	N	Bal...	N	Remy.	Remy.	P.Roe..	Own.	f-	½ Own.	4.70	?-R	E-T	N	Gem..	S-53½	Pr-Ze.
Chrysler.....“60”	156‡	28x5.25	Own.....	6-3x4¼	21.6	180	L	Ch..	Al..	7	Y	P F.	F	Pu..	N	N	Str....	Y	Remy.	Remy.	P.G&H..	Own..	m-Spi...	½ Own.	4.6°	E-F.	E-T	H	Ross.	S-53..	Pr-Ze.
Chrysler.....“70”	162½‡	30x6.00	Own....G	6-3⅛x4¾	23.4	218	L	Ch..	Al..	7	Y	P F.	F	Pu..	Y	N	Bal...	Y	Remy.	Remy.	P.G&H..	Own..	m-U-P..	½ Own.	4.30	E-F.	E-T	H	Gem..	S-51⅝	Pr-Ze.
Cunningham.....V-7	132-142	33x6.75	Own....V7	8-3¾x5	45.0	442	L	He..	C I.	3	N	P F.	N	Pu..	Y	N	Str...	N	Delco.	Delco.	D.Own..	Own..	f-Spi....	Fl Tim..	4.23	I-F.	I-F.	M	Ross.	J-62...	Pr-Al..
Dagmar.....6-60	120	32x6.20	Lyc.....4S	6-3¼x4½	25.3	224	L	Ch..	C I.	4	....	P C.	N	Pu..	N	....	Sch...	N	Delco.	Delco	P.B&B..	W-M..	m-Spi...	½ Sal..	5.10	E-R	E-T	H*	Ross.	S-52..	Pr-Al..
Dagmar.....6-70	138	33x5†	Con....6J	6-3¾x5	33.8	331	L	He..	C I.	4	....	P C.	N	Pu..	N	....	Sch...	N	Delco.	Delco	D.B-L...	B-L..	m-Spi...	½ Tim..	4.90	E-R	I-R.	N	Gem..	S-52..	Pr-Al.
Davis.....92-27	115	32x6.00	Con...11U	6-3¼x4⅝	25.3	230	L	Ch..	C I.	7	Y	P C.	N	Pu..	N	N	Str...	Y	Delco.	Delco.	P.B&B..	W-G..	m-Pet...	¾ Col..	4.90	E-F.	E-T	H	Ross.	S-52..	Pr-Al
Davis.....94-27	109	29x4.95	Con...20L	6-2⅝x4¾	18.1	169	L	Ch..	Al..	4	Y	P C.	N	Pu..	N	N	Til....	N	Delco.	Delco.	P.B&B..	W-G..	m-Pet...	½ Col..	5.37	E-F.	E-T	H	Ross.	S-51½	Pr-Al
Diana.....St. 8	125½	32x6.00	Cont...12Z	8-3 x4¼	28.8	240	L	Ch..	C I.	5	Y	PK.	F	Pu..	N	Y	Str...	Y	Delco.	Delco.	P.B&B..	War..	m-Mec...	½ Col...	5.10	E-F.	E-T	H	Ross.	S-54¼	Pr-Al..
Dodge Brothers.....	116	31x5.25	Own.....	4-3⅞x4½	24.0	212	L	He..	Al..	5	N	P S.	N	Pu..	N	N	Ste....	Y	N-E..	N-E..	P. Own..	Own..	m-Own..	½ Own.	4.16	E-R	I-R.	N	Gem..	S-55..	Pr-Ze.
DuPont.....E	125	32x6.20	Wis.....Y	6-3⅜x5	27.3	268	I	Ch..	C I.	3	N	P C.	N	Pu..	N	N	Sch...	N	Bosch.	Bosch.	D.Long..	Cpl...	m-Alm...	½ Col..	4.7	E-F.	E-T	H	Ross.	S-60..	Pr-A-Z
Elcar.....6-70	117	28x5.25	Lyc...WT	6-2⅞x4¾	19.8	185	L	Ch..	C I.	4	N	P C.	N	Pu..	N	N	Sch...	N	D-R..	D-R..	P.Long..	W-G.	m-.....	½ Sal..	4.9	E-F.	E-T	H	Ross.	S-51..	Oe-..
Elcar.....8-82	123	30x6.00	Lyc....GT	8-2⅝x4¾	24.2	226	L	Ch..	C I.	5	Y	PK.	Y	Pu..	Y	N	Swan..	N	D-R..	D-R..	P.Long..	W-G.	m-.....	½ Sal..	4.6	E-F.	E-T	H	Ross	S-55?	Pr-Al..
Elcar.....8-90	127-132	32x6.20°	Lyc..4HM	8-3¼x4½	33.8	299	L	Ch..	Al..	5	Y	P C.	Y	Pu..	N	N	Swan..	N	D-R..	D-R..	D Long..	W-G.	m-Spi...	½ Sal..	4.7	E-F.	E-T	H	Ross.	S-58	Bowen
Erskine.....6	107	28x4.40	Own....8F	6-2⅝x4½	16.5	146	L	Ch..	CI..	4	....	PK.	F	Pu..	N	N	Str...	Y	D-R..	D-R..	P.Long..	War..	m-Spi...	½ Tim..	5.12	I-F.	I-F.	M	Gem..	S-52..	Pr-Al..
Essex.....6	110½	30x4.75	Own.....6	6-2 1/16x4¼	17.3	145	L	Ch..	Al..	3	N	P S	N	Th..	N	Y	Ste....	N	A-L...	A-L...	P-Own..	Own..	m-Spi...	½ Own.	5.60	E-R	I-R.	N	Own..	S-54⅞	Ow...
Falcon-Knight.....	109½	30x5.00	Wilson....	6-2 1/16x3⅞	20.7	144	X	Ch..	C I.	7	....	PK.	Y	.....	.....	.....	Til....	Y	A-L...	A-L...	P.B&B..	.....	m-.....	½	5.11	I-F.	I-R.	Se	.....	S-51¾	Pr-....
Flint.....Z-18	110	30x5.25	Con.....9L	6-2¾x4¾	18.1	169	L	Ch..	Al..	4	N	PK.	N	Pu..	N	N	Joh...	N	A-L...	A-L...	P.Own..	Own..	m-U-M..	½ Own	4.87	E-R	E-T	N	Own..	S-52..	Pr-Ze.
Flint.....60	115	30x5.77	Con...14U	6-3¼x4⅝	25.3	230	L	Ch..	C I.	7	N	PK.	Y	Pu..	Y	N	Sch...	Y	A-L...	A-L...	P.Own..	Own..	m-Spi...	½ Own	4.77	I-F.	E-T	H	Ross.	S-51½	Pr-Ze.
																									4.09						
Flint.....80	120	32x6.20	Con....6E	6-3⅜x5	27.3	268	L	Ch..	C I.	7	Y	P C.	Y	Pu..	Y	N	Str...	Y	DeJo	A-L...	P.Own..	Own..	m-Spl...	½ Own.	4.77	I-F.	E-T	H	Ross.	S-55..	Pr-Ze.
Ford.....T	100	29x4.40	Own.....T	4-3⅜x4	22.5	177	L	He..	C I.	3	N	Sp..	N	Th..	N	N	Hol...	N	Own..	Own..	D.Own..	Own..	m-Own..	½ Own.	3.63	E-T	I-R.	N	Own..	O-43½	OG..
Franklin.....11	119	32x6.00	Own....11	6-3¼x4	25.3	199	I	Ch..	Al..	7	Y	P C.	Y	A...	N	O	Str...	Y	A-K..	Dyn..	P.B-L...	Own..	m-Spi...	½ Own.	4.73	E-T	E-R	N	Own..	E-38..	Pr-Ze.
Gardner.....6B	118	31x5.25	Lyc..4SM	6-3¼x4½	25.3	224	L	Ch..	C I.	4	N	P C.	N	Pu..	Y	N	Sch...	N	Remy.	Remy.	P.B&B..	War..	m-Cle...	½ Col..	4.90	I-F.	I-R.	M	Ross.	S-57..	Pr-Al..
Gardner.....80	122	30x5.25	Lyc....GT	8-2¾x4¾	24.2	226	L	Ch..	C I.	5	Y	PK.	F	Pu..	Y	N	Sch...	Y	D-R..	D-R..	P.B&B..	W-G..	m-Cle...	½ Col..	4.89	I-F.	E-T	M	Ross.	S-57..	Pr-Ba.
Gardner.....90	130	32x6.00	Lyc.....	8-3¼x4½	33.8	298	....	Ch..	C I.	5	Y	P C.	F	Pu..	Y	N	Sch...	Y	D-R..	D-R..	P.B&B..	W-G..	m-Cle...	½ Col..	4.25	I-F.	E-T	M	Ross.	S-57..	Pr-Al.
Hertz.....D-1	114	30x5.77	Con...18U	6-3¼x4⅝	25.3	230	L	Ch..	C I.	7	Y	P F.	N	Pu..	N	N	Zen...	Y	Delco.	Delco.	D.Long..	Det...	m-Alm...	½ Tim..	4.89	I-F.	E-T	M	Ross.	S-56..	Pr-Al.
Hudson.....Super 6	127¾	33x6.00	Own.....6	6-3½x5	29.4	288	F	Ch..	Al..	4	N	P S.	N	Pu..	N	Y	Ste....	N	A-L...	A-L...	P-Own..	Own..	m-Spi...	½ Own.	4.45	I-F	I-R.	Se	Gem..	S-57½	Ow...
Hupmobile.....A-1	114	30x5.25	Own...“A”	6-3⅛x4¼	23.4	196	L	Ch..	C I.	4	Y	P C.	Y	Pu..	Y	N	Str	N	A-L...	A-L...	P-B&B..	Det...	m-Mec...	½ Own.	4.90	B-F.	E-R	M	Ross.	S-54..	Pr-Al..
Hupmobile.....E-3	125	32x6.00	Own....E	8-3 x4¾	28.8	268	L	Ch..	C I.	5	Y	PK.	F	Pu..	Y	N	Str....	Y	Delco	A-L...	D.Long.	Det...	m-U-P..	½ Own.	4.9°	E-F.	E-T	H	Ross.	S-56½	Pr-Al..
Jordan.....6	165¾‡	28x5.25	Cont.....	6-3¼x4	25.3	199	L	Ch..	.....	7	.....	.....	Y	.....	.....	.....	Str....	Y	A-L...	A-L...	P	.....	.....	.....	.....	E-F.	.....	H	.....	S-	.....
Jordan.....AA	125½	32x6.20	Con....9K	8-3 x4⅜	28.8	268	L	Ch..	C I.	5	Y	P K.	N	Pu..	Y	N	Str....	Y	Bosch	Bosch.	P.Det...	Det...	m-Alm...	¾ Tim..	4.64	E-F.	E-T	H	Gem..	S-55¾	Pr-Al..
Jordan.....J-1	116	32x6.00	Con....8S	8-2⅞x4¾	26.4	247	L	Ch..	C I.	5	Y	P F.	N	Pu..	Y	N	Str....	Y	Bosch	Bosch.	P.Long..	War..	m-Alm...	½ Tim..	4.4°	E-F.	E-T	H	Gem..	S-55¾	Pr-Al..
Kissel.....6-55	124	33x6.00	Own....55	6-3 1/16x5⅛	32.6	265	L	Ch..	Al..	3	N	P F.	Y	Pu..	Y	N	Sch...	Y	D-R..	D-R..	P.B&B..	W-G..	m-Spi...	½ Tim..	4.09	E-F.	E-T	H	Ross.	S-60..	Pr-Da.
Kissel.....8-65	125-132	32x6.00	Own....65	8-2⅞x4¾	26.5	246	L	Ch..	Al..	5	....	PC..	F	Pu..	Y	N	Sch...	Y	D-R..	D-R..	P.B&B..	W-G..	m-Spi...	½ Tim..	4.6°	E-F.	E-T	H	Ross.	S-60..	Pr-Da.
Kissel.....8-75	131-139	33x6.00	Own....75	8-3 1/16x4½	32.6	287	L	Ch..	Al..	5	Y	P F.	Y	Pu..	Y	N	Sch...	Y	D-R..	D-R..	P.B&B..	W-G..	m-Spi...	½ Tim..	4.89	E-F.	E-T	H	Ross.	S-60..	Pr-Da.
Lincoln.....8	136	33x5†	Own.....8	8-3⅜x5	36.4	358	L	Ch..	Al..	5	N	P C.	N	Pu..	N	Y	Str....	Y	Delco	Delco.	D.Own..	Own..	m-Spi...	Fl Tim..	4.58	I-F.	E-R	M	Own..	S-60..	Pr-Al..

KEY TO SYMBOLS

°—Others Furnished
•—At extra cost
†—Balloons at extra cost
‡—Overall Length
½—Semi-floating
¾—Three-quarter floating
A—Air
Al—Aluminum
A-Z—Alemite-Zerk
B—Semi-steel
B-F—Both internal and external, four wheels
BO—Bevel Gear Overhead shaft
Ch—Chain
CI—Cast Iron
CO—Chain; Overhead shaft
Cu—Oil and grease cups
D—Multiple disk
E—Full elliptic
E-F—External four wheels
E-R—External rear wheels
E-T—External transmission
f—Fabric
F—Filter
Fl—Full floating
G—Head and side
Gr—Grease cups
H—Horizontal (valves)
H—Hydraulic (brakes)
He—Helical gear
Hol—Holley
I—In head
I-F—Internal four wheels
I-R—Internal rear wheels
J—Three-quarter elliptic
K—Cone
L—L head
m—Metal
M—Mechanical
N—None
N—Platform (rear springs)
O—Optional (brakes)
O—Special type (rear springs)
Oc—Oil cups
OG—Oil and Grease Cups
Ow—Oil cups with wick feed
P—Single plate
Pr—Pressure gun
PC—Pressure to all crankshaft and connecting rod bearings
PF—Full pressure to all bearings
PK—Pressure to crankshaft, connecting rods and camshaft bearings
PS—Splash with pressure
Pu—Pump
Q—Quarter elliptic
R—Rectifier
S—Semi-elliptic
Se—Servo
Sep—Separate
Sp—Splash (lubrication)
Sp—Spur gear (camshaft drive)
Spe—Special make
Sta—Standard
T—T head
Th—Thermo-syphon
V—Cantilever
Var—Varies
X—Sleeve valve
Y—Yes

ABBREVIATIONS—NAMES OF MFRS. OF STOCK PARTS

A-K—Atwater Kent
A-L—Auto-Lite
Ada—Adams
Al—Alemite
Alm—Almetal
Ans—Ansted
B&B—Borg & Beck
B-L—Brown-Lipe
Bal—Ball & Ball
Ba—Bassic cups
Car—Carter
CAS—CAS Products
Cle—Cleveland
Cli—Climax
Con—Continental
Col—Columbia
Cpl—Campbell
Da—Dawson
DeJo—DeJon
Det—Detroit
Do—Dot
D-R—Delco-Remy
Dur—Durston
Dyn—Dyneto
Eat—Eaton
Fli—Flint
Ful—Fuller
Gdr—Goodrich
Gem—Gemmer
G & H—Guay & Haigh
Hoo—Hoosier
Jac—Jacox
Joh—Johnson
Ju—Justrite
L-N—Leece-Neville
Lav—Lavine
Lyc—Lycoming
M&E—Merchant&Evans
Mar—Marvel
Mec—Mechanics Machine
Mun—Muncie
N-E—North East
Nor—Northway
Pet—Peters
Ray—Rayfield
Roc—Rockford
Sa—Saal
Sal—Salisbury
Sch—Schebler
Sne—Snead
Spe—Special Make
Spi—Spicer
Spl—Splitdorf
Ste—Stewart
Stl—Sterling
Str—Stromberg
Thr—Thermoid
The—Thiemer
Til—Tillotson
Tim—Timken
U-M—Universal Machine
U-P—Universal Products
W-G—Warner Gear
War—Warner
Wes—Westinghouse
W-M—Willys-Morrow
Wis—Wisconsin
Ze—Zerk
Zen—Zenith

(*Continued on page 42*)

CADILLAC'S program of 50 Body Styles and Types in 500 Color and Upholstery Combinations was the first genuinely new note in motor cars in five years. It made the motor car once again a thing of personal pride and individual distinction.

But color and body variety are not the only new and finer elements in this new Cadillac. In every performance detail; in speed and power; in value and dependability it surpasses any former Cadillac.

Proof of this is found in the fact that the demand for the new 90-degree, eight-cylinder Cadillac is far greater than that of all other cars at its price, or over, put together.

All eyes are focusing on the great new

CADILLAC

Priced from $2995 upward, f. o. b. Detroit

NEW 90 DEGREE

CADILLAC

DIVISION OF GENERAL MOTORS CORPORATION

Mechanical Specifications of Current Passenger Car Models—Continued

(From page 40)

MAKE AND MODEL	Wheel Base, (Inches)	Tire Size Decimals-Balloons	ENGINE: Make and Model	Number of Cyls., Bore and Stroke	Rated H.P. N.A.C.C.	Piston Displacement	Valve Arrangement	Camshaft Drive	Piston Material	No. Main Bear.	Crankshaft Vib'n Damper?	Oiling System	Oil Cleaner?	Cooling System	Thermostat?	Radiator Shutters?	Carburetor Make	Air Cleaner?	ELECTRICAL SYSTEM: Ignition System make	Generator and Starter Make	Clutch—Type and Make	Gear Set—Make	Universals—Type and Make	REAR AXLE: Type and Make	Gear Ratio	BRAKES: Feet—Type and Location	Hand—Type and Location	4 Wheel Type (*=Optional)	Steering Gear—Make	Rear Springs—Type and Length	Chassis Lubrication—Type and Make
Locomobile.....8-66	124	30x5.77	Own...8-P	8-2½x4	25.3	199	I	Ch..	C I.	5	Y	P F.	F	Pu..	N	N	Str...	Y	DeJo..	DeJo..	P.Spi...	War .	m-U-M..	½ Ada..	4.7°	I-F.	I-R.	Se	War..	S-55⅜	Pr-Ze.
Locomobile.....8-80	130	32x6.00	Lyc Spe...	8-3¼x4½	33.8	299	L	Ch..	Al..	5	Y	PC.	F	Pu..	Y	N	Str.....	....	DeJo..	DeJo..	P.B&B..	War...	m-Spi...	½ Sal..	4.81	I-F.	I-R.	Se	Ross..	S-58..	Pr-Ze.
Locomobile.....48	142	33x6.75	Own....48	6-4½x5½	48.6	525	T	He..	C I.	7	Y	P F.	F	Pu..	Y	N	Bal...	N	Delco.	Wes...	P.Own..	Own..	m-Spi...	Fl Own..	3.50	B-F.	I-R.	M	Ross..	J-50...	Pr-Ze.
Locomobile.....'90"	138	33x6.75	Own....90	6-3½x5¼	36.0	372	L	Ch..	C I.	7	Y	P C.	F	Pu..	Y	N	Str...	Y	DeJo..	DeJo..	P.Own..	Own..	m-Spi...	½ Eat..	4.5°	I-F.	I-R.	Se	Ross..	S-60..	Pr-Ze.
Marmon.....Little	116	29x5.25	Own.....	8-2¾x4	24.2	190	I	Ch..	Al..	5	Y	PK.	F	Pu..	Y	N	Seh...	N	D-R..	D-R..	P.....	.....	m-.....	.....	Var.	I-F.	I-F.	M	Ross..	S-56..	Myers
Marmon.....E-75	136	32x6.75	Own..E-75	6-3¾x5½	33.8	340	I	He..	C I.	3	Y	P F.	Y	Pu..	N	N	Seh...	N	D-R	D-R..	P.B&B..	W-G..	m-Cle...	½ Tim..	5.11	E-F	E-T	H	Gem..	Tr-45.	Bowen
Marmon.....E-75	136	33x6.20	Lyc....4H	8-3¼x4½	33.8	299	L	Ch..	Al..	5	....	P C	N	Pu..	N	....	Swan..	N	DeJo.	DeJo.	P.B&B..	B-L ..	mf-Cle..	Fl Tim..	3.53	E-F.	I-R.	H	Ross..	S-58½	Bowen
M:Farlan.....St. 8	131	33x6.75	Own....TV	6-4½x6	48.6	575	T	He..	Al..	4	....	P C.	N	Pu..	N	N	Str....	....	DeJo.	DeJo.	P.B&B..	W-G..	m-Spi...	½ Col..	4.90	E-F.	E-T	H	Ross..	S-64..	Bowen
M:Farlan.....TV	141¼	33x6.75	Con....7Z	6-3⅛x4¼	23.4	196	L	Ch..	C I.	4	N	P C.	F§	Pu..	Y	N	Car....	Y§	Delco.	Remy.	P.B&B..	W-G..	m-Spi...	½ Col..	4.89	E-F.	E-T	H	Ross..	S-54..	Pr-Al.
McFarlan.....Series A	113	30x5.25	Con....26L	6-2⅞x4¾	19.8	185	L	Ch..	CL..	4	N	P K	Y	Pu..	N	N	Car....	Y	A-L..	A-L..	P.B&B..	Own..	f-Thr...	½ Own..	4.80	B-F.	E-T	M	Gem..	S-50½	Pr-Al.
Moon.....6-60	110	29x4.75	Con....26L	6-2⅞x4¾	21.6	170	L	He..	C I.	4	N	P F.	Y	Pu..	Y	N	Mar...	Y	Delco.	Delco.	P.B&B..	Own..	f-Thr...	½ Own..	4.50	B-F.	E-T	M	Gem..	S-56½	Pr-Al.
Moon.....Light Six	108	30x4.75	Own.....	6-3x4	28.4	279	I	He..	C I.	7	N	P F.	Y	Pu..	Y	N	Mar...	Y					m-Own..	½ Own..	4.67	B-F.	E-T	M	Gem..	S-53⅞	Pr-Al
Nash.....Advanced	121-127	33x6.00	Own...261	6-3⅛x5																			f-Thr..								
Nash.....Special	112½	31x5.25	Own...231	6-3¼x4½	25.3	224	I	He..	C I.	7	Y	P F.	Y	Pu..	Y	N	Mar..	Y	Delco.	Delco.	P.B&B..	Own..	m-Own..	½ Own..	4.67	B-F.	E-T	M	Gem..	S-53⅞	Pr-Al
Nash.....'6"	113	30x5.25	Own....OS	6-2⅞x4¾	19.8	185	L	Ch.	C I.	3	Y	P C.	Y	Pu..	N	N	Mar..	Y	Remy.	Remy.	P. Own..	Mun..	m-Mec.	½ Own..	4.73	B-F.	E-R	M	Jac..	S-52½	Pr-Ze.
Oakland.....30E	110¼	30x5.25	Own...30E	6-2⅞x4¾	19.8	185	L	Ch.	C I.	3	Y	P K.	Y	Pu..	N	N	Joh..	Y	D-R..	D-R..	P.B&B..	Mun..	m-Mec.	½ Own..	4.73	B-F.	E-R	M	Jac..	S-50¼	Pr-Al.
Oldsmobile.....30	100¼	28x4.75	Own.....	4-3⅜x4	18.2	143	L	Ch..	C I.	3	N	P K.	N	Pu..	N	N	Til....	N	A-L..	A-L..	P.B&B..	Own..	m-Mec..	½ Own..	5.11	B-F	E-R	M	Own..	S-56..	Bijur
Overland.....(4) Whippet	106	29x4.75	Own....96	6-3 x4	21.6	170	L	He..	C I.	3	N	P F	N	Pu..	N	N	Own..	N	A-L..	A-L..	P.B&B..	Own..	m-Mec..	½ Own..	4.67	I-F..	I-R	M	Own..	S-56..	Bijur
Overland.....(6) Whippet	106	33x5.77	Own.....6	6-3½x5	29.4	289	L	Ch..	Al..	7	N	P F.	R	Pu..	Y	N	Own..	N	Delco.	Dyn..	P.Own..	Own..	m-Mec..	½ Own..	4.33	I-F..	I-R	M	Own..	S-54..	Pr-Ze.
Packard.....6	126-133	33x5.77	Own.....8	8-3½x5	39.2	385	L	Ch..	Al..	9	N	P F.	R	Pu..	Y	Y	Joh ..	Y	Delco.	Dyn..	P.Own..	Own..	m-Mec..	½ Sal..	4.45	E-F.	E-T	H	Gem..	S-58. .	Pr-Ze.
Packard.....8	136-143	33x6.75	Own.....8	8-3½x5	39.2	385	L	Ch..	C I.	3	N	P F.	R	Pu..	Y	Y	Joh ..	Y	Remy.	Remy.	P.Roc...	War..	m-Mec..	½ Sal..	4.82	E-F.	E-T	H	Gem..	S-54..	Pr-Ze
Packard.....6-45	109	30x5.25	Con..Spec.	6-2⅞x4¾	19.8	185	L	Ch..	Al..	4	N	P K	N	Pu..	N	N	Joh..	Y	A-K..	Remy.	D.Long..	W-G..	m-Mec..	½ Sal..	4.45	E-F.	E-T	H	Gem..	S-58. .	Pr-Ze.
Paige.....6-75	125	32x6.00	Own....75	6-3⅜x5	27.3	268	L	Ch..	C I.	3	N	P K	N	Pu..	N	N	Joh..	Y	A-K..	Remy.	D.Long..	.....	m-Mec..	½ Sal..	3.69	E-F.	E-T	H	Gem..	S-54..	Pr-Ze.
Paige.....6-65	115	31x5.25	Own....65	6-3⅛x5	25.3	249	L	Ch..	C I.	3	Y	P K.	F	Pu..	Y	N	Str....	....	D-R..	D-R..	D.Long..	W-G..	m-Mec..	½ Sal..	4.44	E-F.	E-T	H	.....	S-54¼	.....
Paige.....8-85	131½	32x6.00	Lyc...Spec.	8-3¼x4½	33.8	299	L	Ch..	Al..	7	....	P K	F	Pu..	N	Y	Str....	Y	A-L..	A-L..	P.....	.....	m-.....	½ Col..	4.42	E-F	E-T	H	Ross.	S-56.	Pr-Al.
Paige.....6-60	116	29x5.25	Cont Spec.	6-3¼x4	25.3	199	L	Ch..	Al..	7	N	P K	F	Pu..	N	Y	Joh..	N	Delco.	Delco.	P.B&B..	Det..	m-Spi...	½ Col..	4.4°	E-F	E-T	H	Ross.	S-56..	Pr-Al..
Peerless.....6-72	126½-133½	33x6.00	Own....72	6-3½x5	29.4	289	L	Ch..	Al..	7	N	P K	N	Pu..	N	Y	Str....	Y	A-L..	A-L..	P.B&B..	Own..	m-Spi...	½ Col..	4.4°	E-F.	E-T	H	Ross..	S-54..	Pr-Al..
Peerless.....6-80	116	32x6.00	Con....8U	6-3¼x4½	25.3	230	L	He..	C I.	3	N	P K	F	Pu..	N	Y	Str....	Y	A-L..	A-L..	P. B&B..	Det..	m-Spi...	½ Own..	4.29	I-F.	I-R.	M	Gem..	S-61¾	Pr-Ze.
Peerless.....6-80	116	33x6.20	Own....69	6-3¼x5	33.8	332	L	Ch..	Al..	7	....	P K.	F	Pu..	N	Y	Str....	Y	Delco.	Delco.	D.Own..	Own..	m-Spi...	½ Tim..	4.45	I-F.	I-R.	M	Gem..	S-56½	Pr-Ze.
Peerless.....8-69	133½	32x6.00	Own....90	6-3½x5	29.4	289	L	Ch..	Al..	7	....	P F.	F	Pu..	Y	Y	Own..	N	Delco.	Delco.	P.B&B..	B-L..	m-Spi...	½ Tim..	4.45	I-F.	I-R.	M	Jac..	S-54..	Pr-Ze..
Peerless.....6-90	120	33x6.00	Own....90	6-3½x5	29.4	289	L	He..	C I.	7	Y	P F.	F	Pu..	N	Y	Own..	N	Remy.	Remy.	P .Own.	Own..	m-Own..	½ Own.	4.18	E-R	I-R.	N	Jac ..	S-54..	Pr-Ze.
Pierce Arrow.....36	138	33x6.75	Own....36	6-4 x5½	38.4	415	T	He..	C I.	7	Y	P F.	F	Pu..	N	Y	Own..	N	Remy.	Remy.	P .Own.	Own..	m-Own..	½ Own.	4.5°	I-F.	E-T	H	Ross.	S-55..	Pr-Al
Pierce Arrow.....80	130	32x5.77	Own....80	5-3½x5	29.4	289	L	Ch..	C I.	7	Y	P F.	F	Pu..	N	Y	Car....	N	D-R..	D-R..	P.Long..	Own..	m-Det..	½ Own.	4.70	I-F.	E-T	M	Gem.	S-57..	Pr-Al.
Pierce Arrow.....Six	110	29x4.75	Own..6-27	6-3¼x3¾	25.3	186	L	Ch..	B...	3	N	P C.	Y	Pu..	N	Y	Sch....	Y	Bosch.	Bosch.	P Long.	Mec..	m-Mec..	½ Col..	4.7°	I-F.	I-R.	M	Han..	S-52..	Pr-Al..
Pontiac.....A	121	30x6.20	Own.....A	6-3¼x5	25.2	249	L	Ch..	Al..	7	Y	P C.	Y	Pu..	N	Y	Str....	Y	Delco.	A.Bos	P.Long..	Mec..	m-Mec..	½ Col..	4.70	I-F.	I-R	M	Han..,	S-57..	Pr-Al.
Reo.....6-70	117	31x5 25	Own.. 6-70	6-3¼x4¾	25.3	236	L	Ch..	C I.	9	Y	PC..	N	Pu..	N	Y	Zen....	Y	Delco.	Bosch.	P. Long.	War..	m-Mec.	Sal....	....	....	....	H	Ross.	S-...	....
Rickenbacker.....8-80	119½	32x6 00	Own...8-00	8-3 x4¾	33.8	315	L	Ch..	CL..	7	....	P C.	N	Pu..	N	Y	Zen....	N	Delco.	Bosch.	P.B&B..	....	....	Tim....	4 64	E-F.	E-T	H	Ross	S-56½	Pr...
Rickenbacker.....8-90	136	33x6.00	Own.. B-8	8-3¼x4¼	24.2	226	L	Ch..	C I.	9	....	PK.	N	Pu..	N	N	Soh ..	N	A-L..	A-L..	P.Jones..	.....	m-Mec.	Fl Own.	3.72	I-R.	I-R.	N	Own	V-54½	Pr-Al.
Rickenbacker.....8-78		32x6 00	Lyc....GT	8-2¾x4¾	33.8	296	L	Ch..	C I.	5	Y	P C.	F	Pu..	N	Y	Own..	N	Bosch.	Wes...	K.Own..	Own..	m-Own.	Fl Own.	3.72	I-R.	I-R.	N	Own..	S-53¾	Pr-Al.
Roamer.....8-88	126	32x6.25	Lyc..4HM	8-3¼x4½	48.6	453	L	He..	Al..	7	Y	P F.	N	Pu..	N	N	Til....	N	A-L..	A-L..	P.Own..	Own..	m-Spi...	½ Own.	4.87	E-R	I-R.	M	Own..	S-53¾	Pr-Al
Roamer.....8-88	143½	33x5†	Own.40-50	6-4½x4¾	18.2	152	L	Ch..	Al..	7	N	P K	N	Pu..	N	N	Til....	N	A-L..	A-L..	P.Own..	Own..	m-Spi...	½ Own.	4.87	E-R	L.R.	M	Ross..	S-62..	Pr-Al..
Rolls Royce...Silver Ghost	103	30x3½	Con....W-5	4-3⅜x4¼	18.2	169	L	Ch..	C I.	4	N	P K	Y	Pu..	N	N	Til....	Y	DeJo..	DeJo..	P.B&B..	Own..	m-Mec..	½ Tim..	4.9	I-F..	I-R.	M	Ross.	S-62..	Pr-Al.
Star.....4	107	30x4 75	Con....14L	6-2¾x4¾	29.4	289	X	Ch..	C I.	7	N	P K	Y	Pu..	N	N	Til....	Y	DeJo..	DeJo..	D.Long..	Own..	m-Mec..	Tim....	....	I-F.	I-R.	M	Own..	S-50⅛	Pr-Al
Star.....6	137	32x6.75	Own.F 6-85	6-3½x5	39.2	388	X	Ch..	CI..	9	N	PK..	Y	Pu..	N	N	Til....	Y	(Wag.	(Wag.	P.Own.	Own..	f-Thr...	½ Own..	4.18	B-F.	E-T	M	Own..	S-50⅛	Pr-Al.
Star.....G-8	137	32x6.75	Own...G-8	8-3½x5	27.3	242	L	Ch..	C I.	4	N	P K	F	Pu..	N	N	Str....	Y	(Remy	(Remy											
Stearns Knight.....Sta. 6	113	31x5.25	Own.....	6-3⅜x4½															(Wag.	(Wag.	P.Own..	Own..	m-Spi...	½ Own..	4 36	E-R	E-T	H*	Own.	S-56..	Pr-Al.
Studebaker.....Spec. 6	120	32x6.00	Own.....	6-3½x5	29.4	289	L	He..	C I.	4	Y	P K	F	Pu..	N	N	Bal...	Y	(Remy	(Remy											
Studebaker.....Big 6	(120	32x6.00)	Own.....	6-3⅞x5	36.0	353	L	He..	C I.	4	Y	P K	F	Pu..	N	N	Bal...	Y	(Wag.	(Wag.	P.Own..	Own..	m-Spi...	½ Own..	3.69	B-F	E-T	M	Own..	S-56..	Pr-Al.
	(127	32x6.75)																	(Remy	(Remy					4.08						
Stutz.....AA	131-145	32x6.20	Own.....	8-3¼x4½	33.8	299	I	CO.	C I.	9	N	P F.	F	Pu..	N	N	Zen...	Y	Delco.	Delco.	P.B&B..	Det..	m-Mec..	½ Tim..	Var.	I-F.	E-T	Hs	Ross..	S-62..	Myers
Velie.....Std. 50	112	30x5.25	Own....54	6-3¼x4¼	23.4	196	I	He..	C I.	4	N	P F.	N	Th..	N	N	Str....	N	A-L..	A-L..	P.B&B..	W-G..	m-Cle...	½ Own..	4.90	E-F.	E-T	H	Ross..	S-55..	Pr-Ze.
Velie.....Spec. 60	118	30x5.25	Own....52	6-3¾x4⅝	24.4	221	I	He..	C I.	4	N	P F.	N	Th..	N	N	Str....	N	Remy.	Remy.	P.B&B..	Mec..	m-Cle...	½ Own..	4.70	E-F.	E-T	H	Ross..	S-55..	Pr-Do.
Wills Ste. Claire.....T6	127	32x6.00	Own.....	6-3½x5½	25.4	274	I	BO.	C I.	7	N	P F.	N	Pu..	Y	Y	Sch....	N	Delco.	Delco.	P.Own..	Own..	m-Spi...	½ Tim..	4.45	E-F.	E-T	H	Own..	S-58..	Pr-Al
Willys Knight.....66-A	126	32x6.00	Own..66-A	6-3¼x4¾	25.4	236	X	Ch..	Al .	7	N	P K	R	Pu..	Y	N	Til....	Y	A-L..	A-L..	P.B&B..	Own..	m-Mec..	¾ Own..	4.70	B-F.	I-R.	M	Cwn..	S-62¾	Pr-Al.
Willys Knight.....70-A	113¼	32x6.00	Own..70-A	6-2⅞x4⅝	20.7	178	X	Ch..	Al..	7	N	P K	R	Pu..	Y	N	Til....	Y	A-L..	A-L..	P.B&B..	Own..	m-Mec..	½ Own.	5.11	B-F.	E-T	M	Own..	S-55¼	Pr-Al.

KEY TO SYMBOLS

°—Others Used
*—At extra cost
§—On De L. Brougham only
†—Balloons at extra cost
½—Semi-floating
¾—Three-quarter floating
A—Air
Al—Aluminum
B—Semi-steel
B-F—Both Internal and external, four wheels
BO—Bevel Gear Overhead shaft
Ch—Chain
CI—Cast Iron
CO—Chain; Overhead shaft
Cu—Oil and grease cups
D—Multiple disk
E—Full elliptic
E-F—External four wheels
E-R—External rear wheels
E-T—External transmission
f—Fabric
F—Filter
Fl—Full floating
G—Head and side
Gr—Grease cups
H—Horizontal (valves)
H—Hydraulic (brakes)
He—Helical gear
Hs—Hydrostatic
I—In head
I-F—Internal four wheels
I-R—Internal rear wheels
J—Three-quarter elliptic
K—Cone
L—L head
m—Metal
M—Mechanical
N—None
N—Platform (rear springs)
O—Optional (brakes)
O—Special type (rear springs)
Oc—Oil cups
OG—Oil and Grease Cups
Ow—Oil cups with wick feed
P—Single plate
Pr—Pressure gun
PC—Pressure to all crankshaft and connecting rod bearings
PF—Full pressure to all bearings
PK—Pressure to crankshaft, connecting rods and camshaft bearings
PS—Splash with pressure
P&T—Combination Pump and Thermo-syphon
Pu—Pump
Q—Quarter elliptic
R—Rectifier
S—Semi-elliptic
Sep—Separate
Sp—Splash (lubrication)
Sp—Spur gear (camshaft drive)
Spe—Special make
Sta—Standard
T—T head
Th—Thermo-syphon
Tr—Transverse "X" Shape
V—Cantilever
Var—Varies
X—Sleeve valve
Y—Yes

ABBREVIATIONS—NAMES OF MFRS. OF STOCK PARTS

A-K—Atwater Kent
A-L—Auto-Lite
Ada—Adams
Al—Alemite
Alm—Almetal
B&B—Borg & Beck
B-L—Brown-Lipe
Ba—Bassic cups
Car—Carter
Cle—Cleveland
Cli—Climax
Con—Continental
Col—Columbia
Cpl—Campbell
DeJo—DeJon
Det—Detroit
Dit—Ditweiler
Do—Dot
D-R—Delco-Remy
Dur—Durston
Dyn—Dyneto
Eat—Eaton
Fli—Flint
Ful—Fuller
Gdr—Goodrich
Gem—Gemmer
Gi—Gits
Hoo—Hoosier
Jac—Jacox
Joh—Johnson
L-N—Leece-Neville
Lav—Lavine
Lyc—Lycoming
M&E—Merchant & Evans
Mar—Marvel
Mec—Mechanics Machine Co.
Mon—Monson
Mun—Muncie
N-E—North East
Nor—Northway
Pet—Peters
R-D—Rochester-Duesenberg
Ray—Rayfield
Roc—Rockford
Sa—Saal
Sal—Salisbury
Sch—Schebler
Sne—Snead
Spe—Special Make
Spi—Spicer
Spl—Splitdorf
Ste—Stewart
Stl—Sterling
Str—Stromberg
Thr—Thermoid
Til—Tillotson
Tim—Timken
U-M—Universal Machine
U-P—Universal Products
W-G—Warner Gear
Wag—Wagner
War—Warner
Wat—Watford
Wes—Westinghouse
W-M—Willys-Morrow
Wis—Wisconsin
Ze—Zerk
Zen—Zenith

Crankcase Ventilation, Oil Filter, Dual Air Cleaning, Two-Way Cooling, Harmonic Balancer ... item after item ... and now—larger (30x5.25) Balloon Tires and *Four-Wheel Brakes!*

Thus Oldsmobile adds to its imposing array of new features of known value and improvements of demonstrated worth.

Thus Oldsmobile keeps faith with its policy pledged to progress.

To-day, more than ever before, no matter what car you favor or what you are willing to pay ... you owe it to yourself, your pocketbook and your sense of satisfaction to see and drive this Oldsmobile.

OLDSMOBILE

Product of GENERAL MOTORS

THOMA REPLACEMENT GLASS SERVICE

Guaranteed Fit—Speedier Installation
Greater Satisfaction—Quick, Sure Profits

THE American Motorist is paying about $30,000,000 yearly for automobile glass breakage! And that huge bill is mounting higher and higher right along — keeping pace with the tremendously increased production of enclosed cars.

What a wonderful opportunity is yours to get the big share of this highly profitable business in your community. With THOMA Replacement Glass Parts Service you can quickly become headquarters for replacement glass parts, for it gives you a high quality glass, guaranteed fit, complete installation in thirty minutes, quick turnover, larger profits.

By all means decide now to stock and feature Thoma Service in your parts department. The "Blue Seal" is your assurance of utmost glass parts satisfaction. Write today for service price lists for makes of cars you handle.

At a cost of less than a penny a day the Thoma Certificate protects car owners against glass breakage for one year. Ask us about this remarkable merchandising plan for boosting your profits.

Manufactured exclusively by—

Fairfield **THOMA & SON-INC.** Iowa

Everything in Glass for the Automobile

AMERICA'S FIRST TRULY FINE SMALL CAR

the little MARMON 8

A GOOD IDEA

Everybody seemed to want a small car—and there are abundance of these. But making a FINE CAR *small was the thing that was really in the back of people's minds. The little Marmon 8 is just that.*

THE well-informed dealer who calmly adds up all that has been said and done and seen at the Automobile Shows arrives at the decision that out of it all, there are really only two important facts which deserve his serious consideration — —

First—That the time for the truly fine small car has arrived —

Second—That by leading the field with a car which so accurately interprets this fine small car idea, Marmon today offers the most definite and far-reaching dealer opportunity in the motor car industry

COMPANION TO THE NEW

The little MARMON 8

LARGE MARMON (*Series 75*)

Here are a few of the engineering clinchers

—*the most powerful engine* in proportion to displacement in any stock car

—*the first line-eight to completely solve the problem* of equal and efficient carburetion to all cylinders—due to new principle of Equi-distant Down-Draft Manifolding

—*the longest set of springs* ever known in proportion to wheelbase (the whole wheelbase outside of only 22 inches is devoted to spring length and the springs themselves are anchored in husky rubber knuckles instead of shackles, requiring no lubrication, and in addition, Lovejoy hydraulic shock absorbers are engineered right into the chassis).

The result is a car that ends the argument in demonstration on rough, chuck-hole roads.

—*Hypoid gear drive* which permits car height of 69 inches with normal road clearance and ample head room.

JUST A WORD ABOUT THE MARMON FACTORY

—*Second in the entire industry* in ratio of current assets to current liabilities.

Production—100 cars a day—enough to insure prompt shipment.

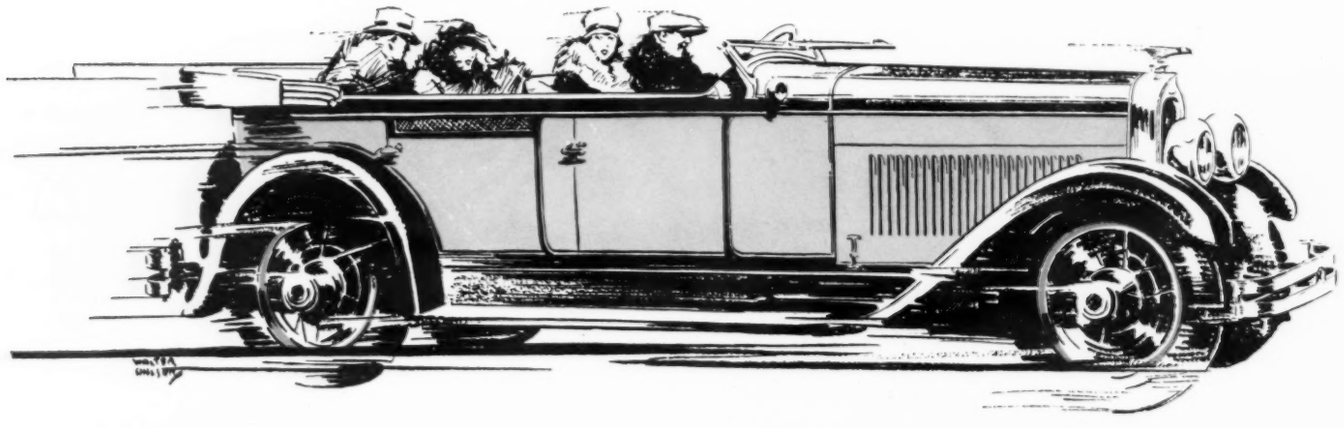
A sales plan that puts real horsepower into your business.

An Advertising Campaign that is the talk of the whole country—magazines, trade journals, newspapers, billboards and the "sellingest" direct-by-mail dealer co-operation in the industry.

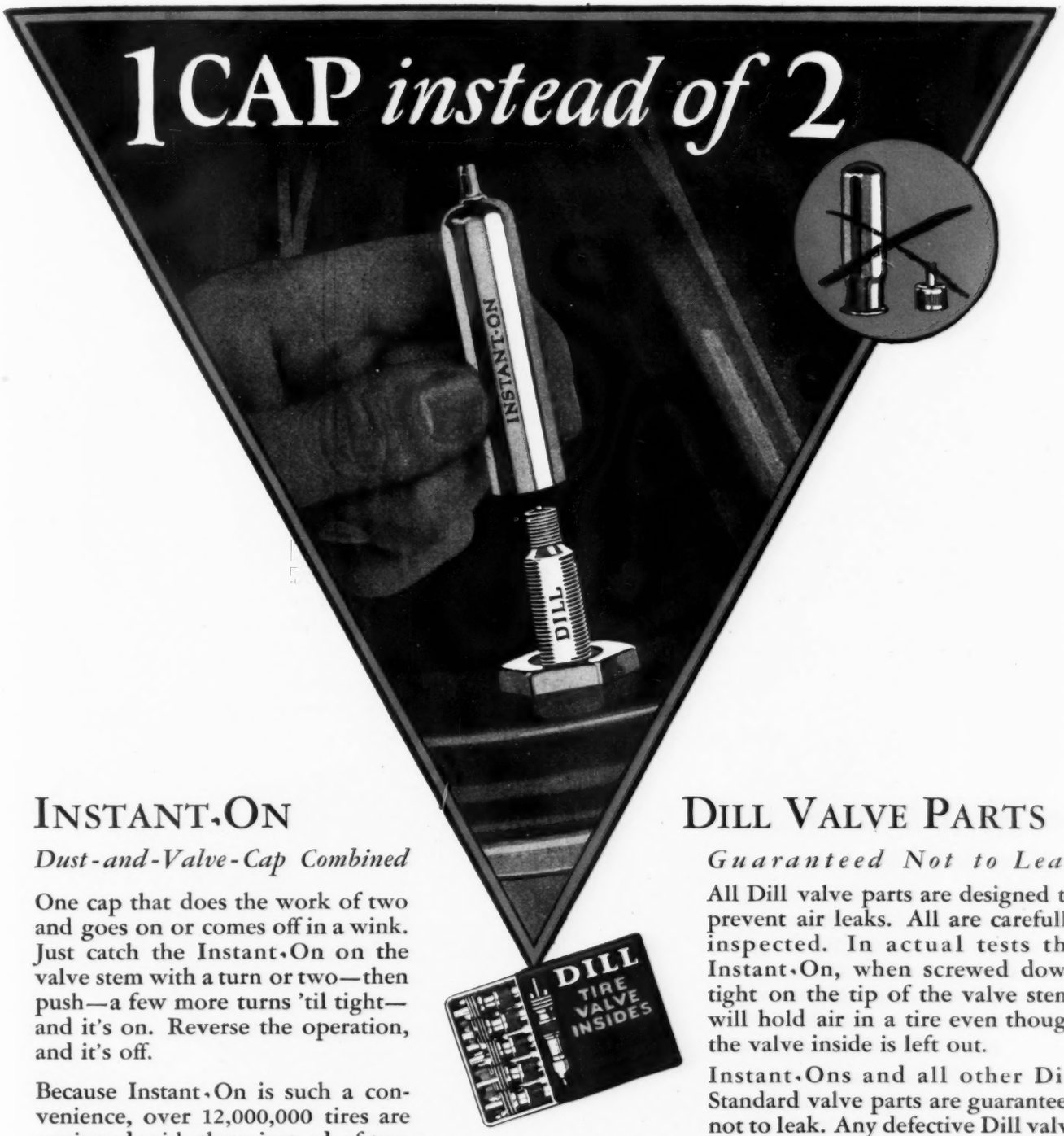
And most important of all, as the old experienced dealer knows, is the fact that this year the grapevine is buzzing with Marmon. Marmon has the call.

It has paid, beyond all expectation, to have looked far into the future and to have produced—AMERICA'S FIRST TRULY FINE SMALL CAR.

MARMON MOTOR CAR COMPANY :: INDIANAPOLIS



1 CAP *instead of* 2



INSTANT-ON

Dust-and-Valve-Cap Combined

One cap that does the work of two and goes on or comes off in a wink. Just catch the Instant-On on the valve stem with a turn or two—then push—a few more turns 'til tight—and it's on. Reverse the operation, and it's off.

Because Instant-On is such a convenience, over 12,000,000 tires are equipped with them instead of two separate caps.

If you are not already selling Instant-Ons order from your jobber now. Furnished in attractive metal display stands. Each set of 5 retails for $1.00.

These sturdy valve insides hold air. The spring and stem are protected by a metal barrel to prevent jamming. Furnished to dealers in metal display stands. Each box of 5 retails for 30c. Ask your jobber.

DILL VALVE PARTS

Guaranteed Not to Leak

All Dill valve parts are designed to prevent air leaks. All are carefully inspected. In actual tests the Instant-On, when screwed down tight on the tip of the valve stem, will hold air in a tire even though the valve inside is left out.

Instant-Ons and all other Dill Standard valve parts are guaranteed not to leak. Any defective Dill valve part will be replaced by the factory free of charge.

If your jobber can't supply you write us direct.

THE DILL MFG. COMPANY · *Cleveland, Ohio*
Manufactured in Canada by the Dill Manufacturing Co. of Canada, Ltd., Toronto

DILL

Standard Tire Valves and Valve Parts

THEY NEVER KNOW HOW HOT TIRES GET

That's why car owners, bus and truck operators everywhere are dumfounded at the results obtained with the India True-Blue [HEAT-PROOF] Inner Tube.

You may know tubes yourself, but if you've never seen the difference between the best of other tubes and the True-Blue after equal service under modern running conditions, you too will be surprised.

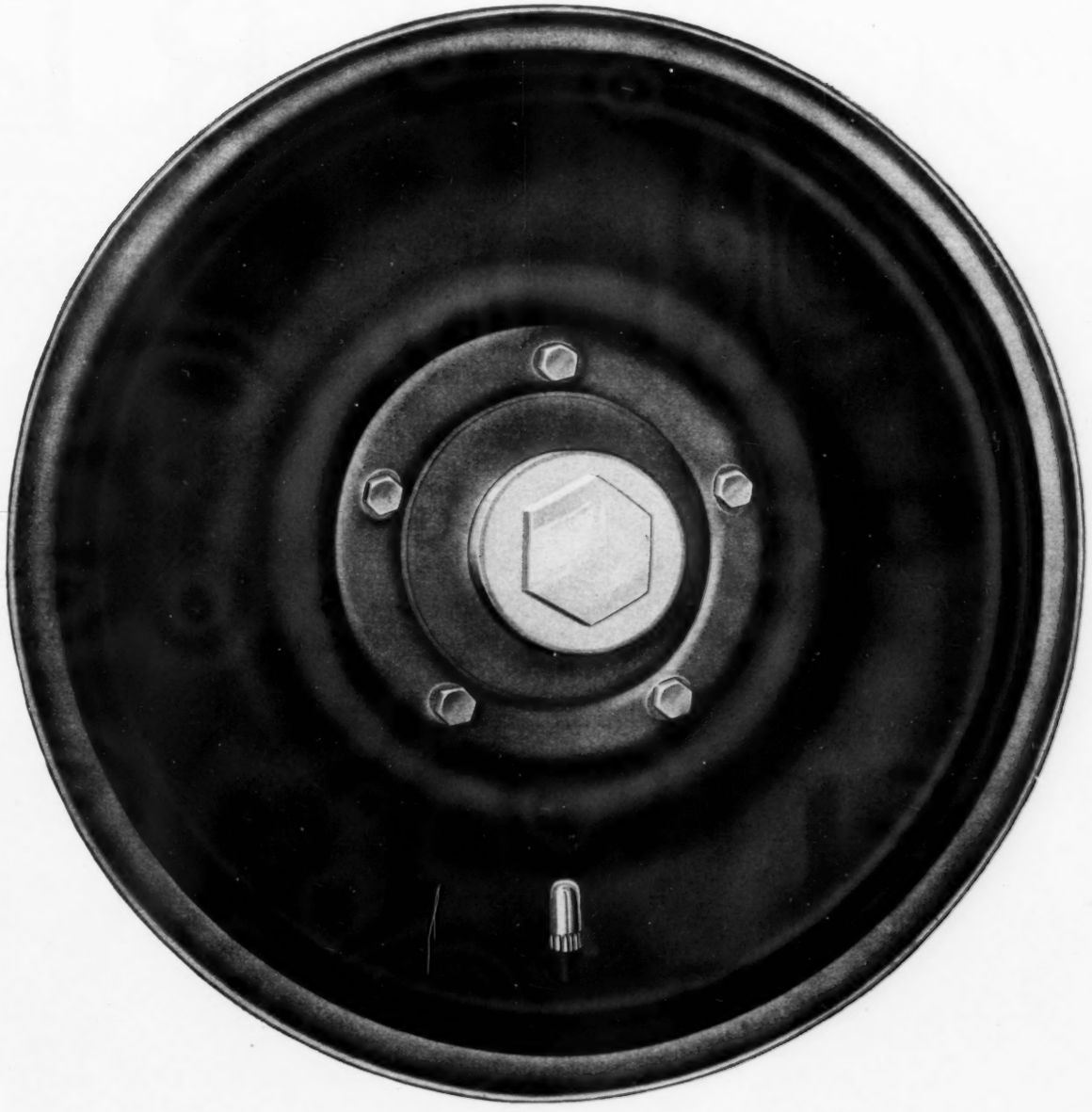
India dealers are selling True-Blue tubes, for more money, and at better profit per sale, than has ever been possible with any other tube. They can do this because True-Blue tubes being HEAT-PROOF actually make any tire give thousands more miles of uninterrupted service.

This is only one of the exclusive features that India dealers have to help them get and hold the best of the tire replacement business in their localities.

So they'll tell you that India is a good line to handle. With it you have some real reasons for asking people to buy.

INDIA
TRUE BLUE
HEAT PROOF
INNER TUBE

INDIA TIRE & RUBBER COMPANY, AKRON, OHIO.



In volume, in production, and in number of customers, 1926 again showed Motor Wheel to be by far the largest wheel manufacturer

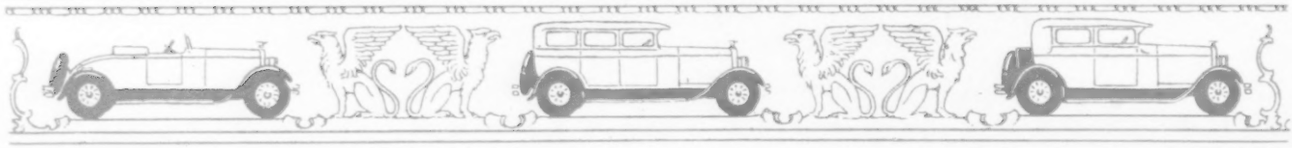
Motor Wheel PRODUCTS

The New GARD

At the Show—

America's First European-Type Eights-in-Line

The New Gardner Series 80 and Series 90 will be exhibited at the Chicago Automobile Show — in Space 13, first floor. Gardner's Chicago headquarters will be at the Congress Hotel. Come in and see us.



NER EIGHT-IN-LINE 80

America's First European-Type *Eight-in-line*

Since the appearance of the Gardner *Eight-in-line*, thousands of automobile dealers selling $1,200 to $2,000 Sixes are finding their market fast dwindling away. And here's the answer for dealers who are experiencing this decline in sales:

A Gardner Eight-in-line at the price of a Six!

Nearly three years ago, Gardner anticipated today's trend toward the *Eight-in-line*. And was the *first to conceive*, the *first to develop*, the *first to announce* and the *first to ship* a European-type *Eight-in-line*.

Not only America's first European-type *Eight-in-line*, but the lowest-priced *Eight-in-line* on the market!

Hundreds of alert dealers—quick to realize that these new-type *Eights-in-line* are going to tear the Six market wide open—have had the foresight to climb on the Gardner bandwagon at the beginning of the parade—and are now all set to ride on to permanent success with these revolutionary New Gardners that spell O-P-P-O-R-T-U-N-I-T-Y in big, bold capital letters.

Now those dealers are sitting on top of the world!

$1395 to $1795

High lights of this amazing new-type car

Advanced Eight-in-line motor. Swan manifold. Thermostatic heat control. Vibration dampener ' ' ' Air cleaner ' ' ' Oil filter ' ' ' Gasoline strainer!

New-type safety chassis. Double-drop frame ' ' ' Tubular cross-members!

Height of car less than 70 inches. Low-hung European design ' ' ' Ample head room ' ' ' Normal road clearance!

Automatic system of chassis lubrication!

Long foreign-type springs ' ' ' snubbers all around ' ' ' Especially designed steering mechanism!

4-wheel brakes ' ' ' fully enclosed ' ' ' perfectly equalized!

Striking, colorful, custom-style bodies. Narrow corner posts assure clear vision.

Luxurious interior ' ' ' Chase-Velmo upholstery ' ' ' Form-fitting seats ' ' ' Tasteful appointments.

Fedco theft-proof number plate system with Loss-of-Use insurance.

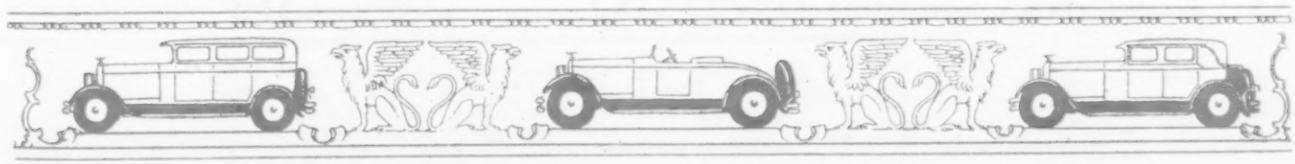
They have a complete line of fine cars to sell—all Gardners—all *Eights-in-line!* Two series selling at $1,395 to $2,495 which completely dominate the *Eight-in-line* field!

To say nothing of the prestige of eight famous performance records established by stock Gardner *Eights-in-line*—and the enthusiastic approval of thousands of happy Gardner *Eight-in-line* owners all over the world!

Gardner's 1926 *Eight-in-line* sales were a full 51% greater than in 1925. Plant facilities have now been expanded to permit an additional increase of 100% in 1927!

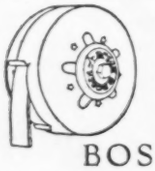
Which means that more dealers will be able to share in Gardner's success in 1927 than ever before. If your territory has not yet been closed, it will be! Right now is the time to act if you want a line with which you can make real money in 1927. Write—wire—or telephone for the whole Gardner story, which includes ***A Liberal Net Profit on Every Sale or Trade-in.***

THE GARDNER MOTOR CO., Inc., ST. LOUIS, U. S. A.



OTHER BOSCH AUTOMOTIVE NECESSITIES

BOSCH SHOCK ABSORBER



Correct control for all makes and types of cars. Three point control for Fords.

BOSCH TRAFFIC-TUNED HORNS, Electric

Four sizes and types of instantaneous warning signals with distinctive tones and efficient warning.

BOSCH SPARK PLUGS

Gas-tight, heat resisting Bosch Spark Plugs give big, ribbon-like sparks for cold weather starting.

BOSCH IGNITION FOR FORDS

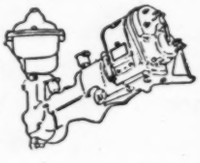
Automatic, dependable Bosch ignition adds new performance to Fords, improves power and gives greater mileage.

BOSCH UNIVERSAL IGNITION COIL

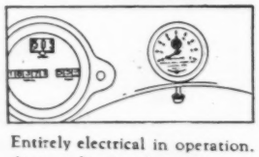
Replaces ignition coils on all makes of cars and trucks. Gives Bosch standard of dependable performance.

BOSCH MAGNETO AND GOVERNOR FOR FORDSONS

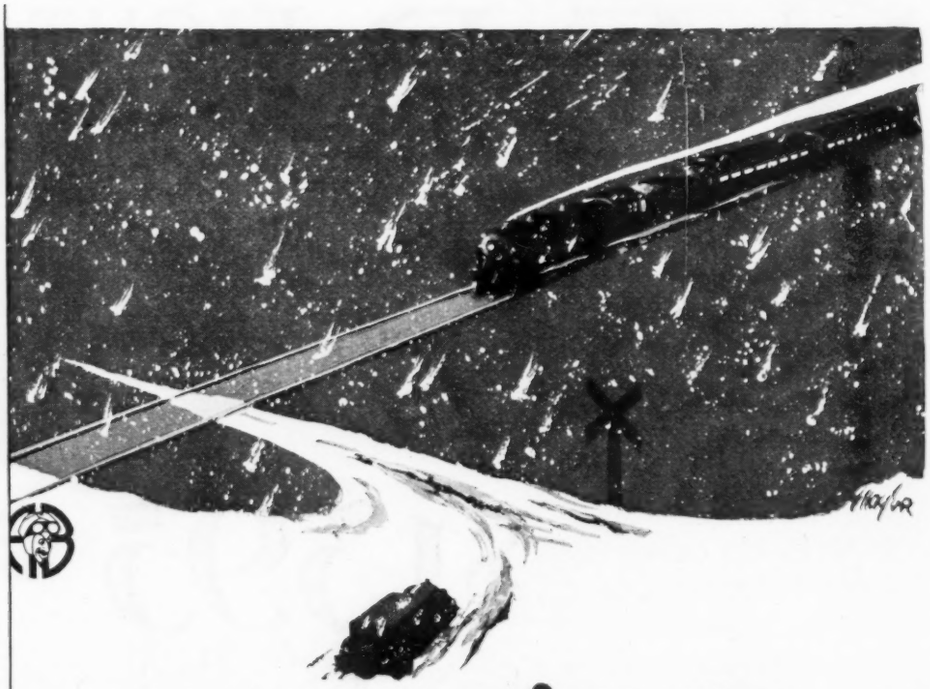
Automatic control for Fordsons. Saves in operation and improves the performance. Saves its cost in a season.



BOSCH AUTOMATIC GAS SIGNAL



Entirely electrical in operation. Accurately records gasoline in tank and automatically flashes warning before tank is empty.



crossings

American Bosch engineers have developed the windshield wiper that is revolutionizing sales. No more peep hole vision when it rains or snows—the double vision two arm Bosch Electric Windshield Wiper keeps both sides of the windshield clear, allowing fair weather vision in the stormiest weather. Both arms controlled by direct drive—non-stalling, non-racing—powerful, constant, uneffected by engine speed. The Bosch two arm Windshield Wiper uses less current than a headlight bulb. Show this new Bosch auto necessity and you will re-equip cars to your capacity. Order today

Double Vision two arm Bosch Electric Windshield Wiper complete $9.75

AMERICAN BOSCH MAGNETO CORPORATION
MAIN OFFICE AND WORKS: SPRINGFIELD, MASS.
BRANCHES: NEW YORK CHICAGO DETROIT SAN FRANCISCO

BOSCH ELECTRIC Windshield Wiper

BOSCH RADIO receivers are noted for their tonal quality, beauty of appearance and simplicity of operation. Wide range of selection is had in 5, 6 and 7-tube receivers, two-cone type reproducers and a range of power units.

An Entirely New Product to the AUTOMOTIVE INDUSTRY

—but one that has established itself through performance in many other industries, particularly plumbing and heating.

Here is a repair that acts quickly and dependably, with less labor and more profit—and it does a better job in the bargain.

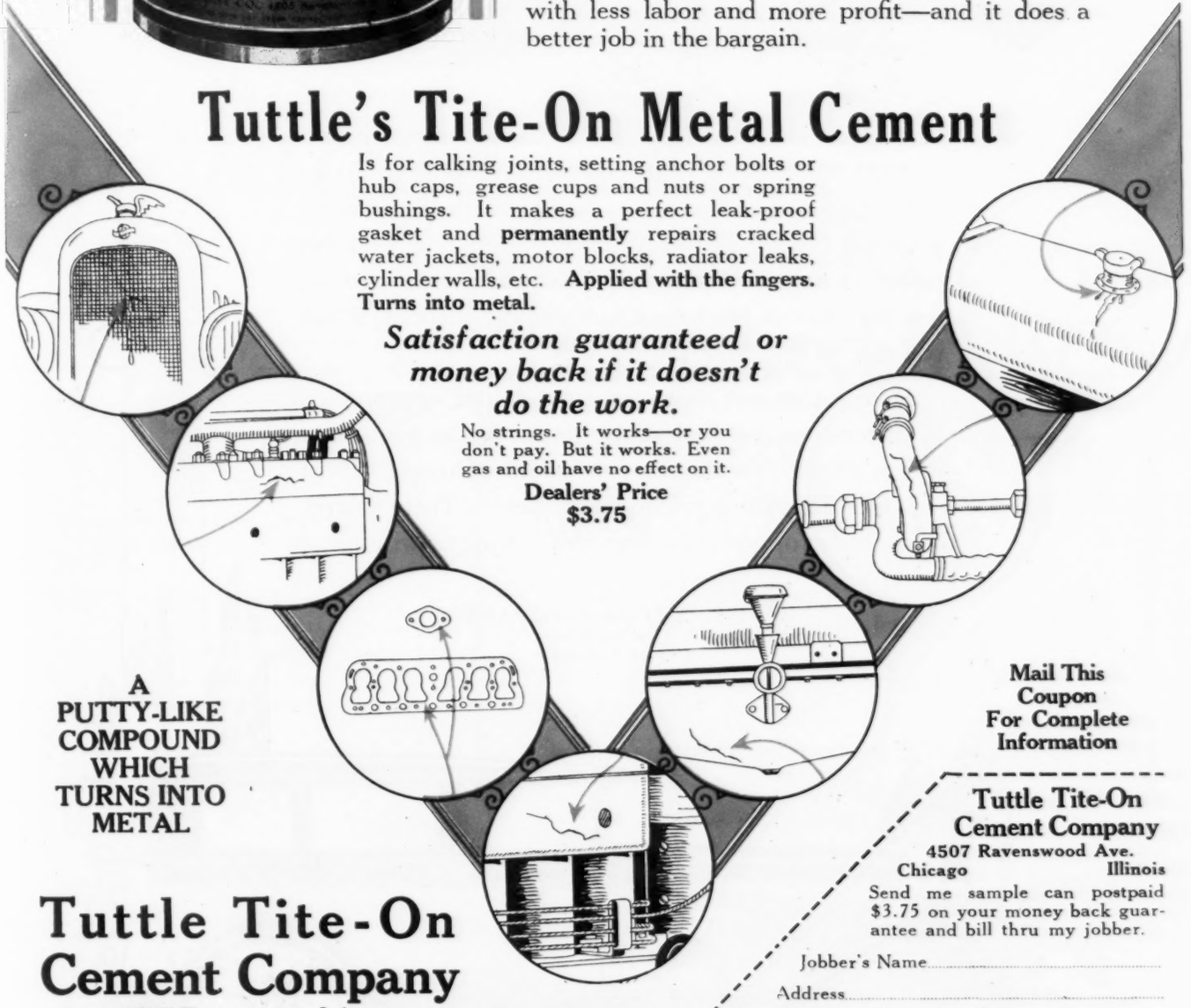
Tuttle's Tite-On Metal Cement

Is for calking joints, setting anchor bolts or hub caps, grease cups and nuts or spring bushings. It makes a perfect leak-proof gasket and **permanently** repairs cracked water jackets, motor blocks, radiator leaks, cylinder walls, etc. **Applied with the fingers. Turns into metal.**

Satisfaction guaranteed or money back if it doesn't do the work.

No strings. It works—or you don't pay. But it works. Even gas and oil have no effect on it.

Dealers' Price
$3.75



A PUTTY-LIKE COMPOUND WHICH TURNS INTO METAL

Mail This Coupon For Complete Information

Tuttle Tite-On Cement Company
4507 Ravenswood Ave.
Chicago Illinois

Send me sample can postpaid $3.75 on your money back guarantee and bill thru my jobber.

Jobber's Name.....
Address.....
Name.....
Street.....
City..... State.....

Tuttle Tite-On Cement Company
4507 Ravenswood Ave.
Chicago Illinois

To meet the demand for full-comfort sell the car that created it

ELCAR

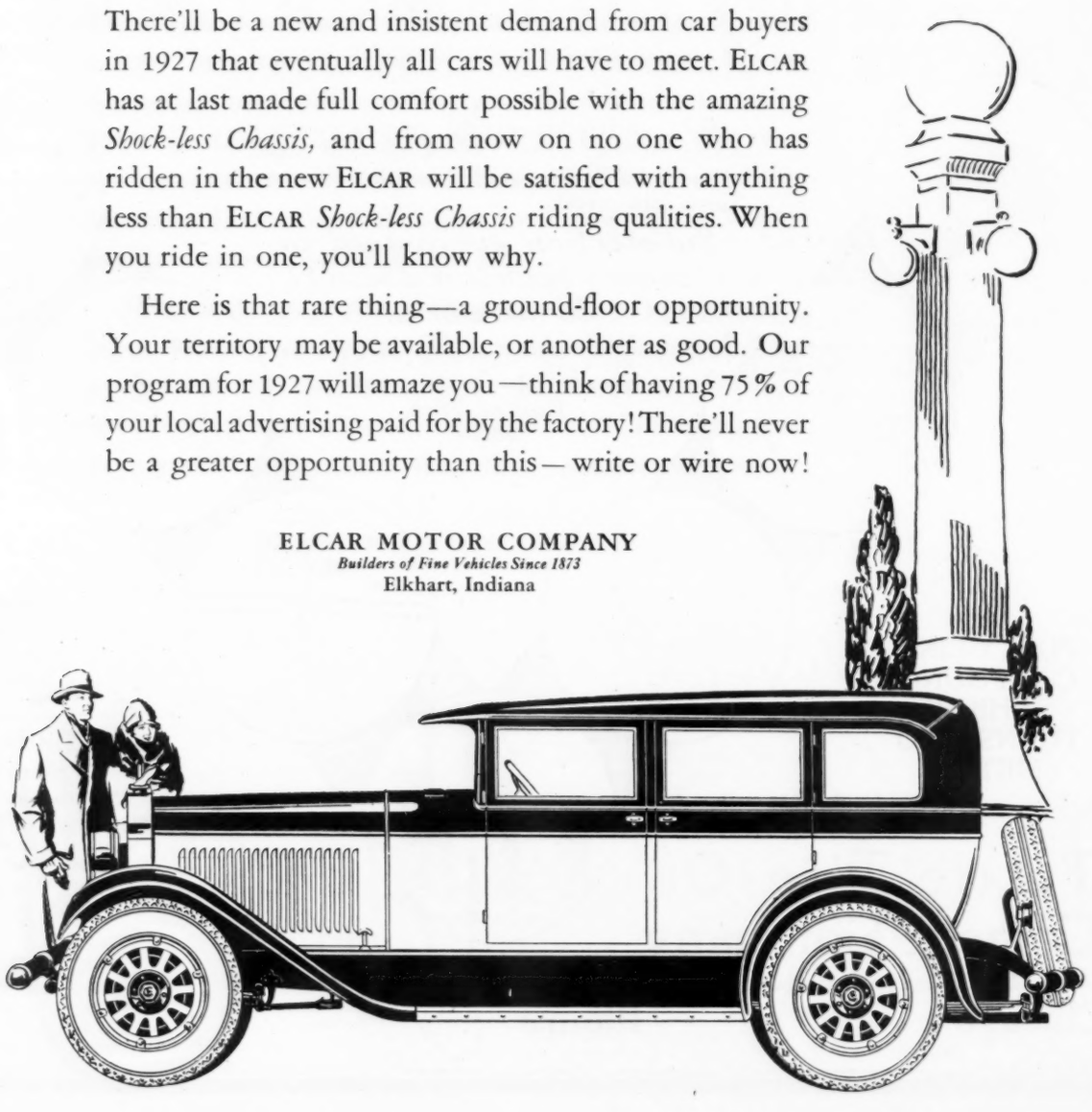
WITH THE

Shock-less Chassis

There'll be a new and insistent demand from car buyers in 1927 that eventually all cars will have to meet. ELCAR has at last made full comfort possible with the amazing *Shock-less Chassis,* and from now on no one who has ridden in the new ELCAR will be satisfied with anything less than ELCAR *Shock-less Chassis* riding qualities. When you ride in one, you'll know why.

Here is that rare thing—a ground-floor opportunity. Your territory may be available, or another as good. Our program for 1927 will amaze you—think of having 75% of your local advertising paid for by the factory! There'll never be a greater opportunity than this—write or wire now!

ELCAR MOTOR COMPANY
Builders of Fine Vehicles Since 1873
Elkhart, Indiana



Again—

All Sales Records Smashed in 1926

WORLD'S HEADQUARTERS FOR TIRE REPAIR EQUIPMENT

A Complete Line of Tire Repair Shops, Including a New Line of Balloon Tire Vulcanizers. Send for Catalog

AND NOW—BIGGER DISCOUNTS to YOU!

More Advertising
New Sales Helps

Order Shaler Vulcanizers Now from any Jobber—it's the biggest repeater in the accessory business

SHALER

C. A. SHALER COMPANY - 204 Fourth St. - WAUPUN, WIS., U. S. A.

Why You Will Want to Be an *AC* Dealer

In selling AC Products, the dealer establishes a contact which ties his business to a most powerful organization and makes a lasting connection, insuring enormous business possibilities now and in the future.

AC equipment, positive and increasing from year to year, is building a tremendous replacement business which will carry on and grow as long as the industry lasts.

No competitive lines can offer the volume and consequent profit that AC does and none of them can show such a guaranty for the future.

Practically every make of car now uses one or more, or all AC Products as factory equipment—among these makers being such firms as Buick, Cadillac, Chandler, Chevrolet, Chrysler, Flint-Star, Hudson-Essex, Nash, Oakland-Pontiac, Oldsmobile, Paige-Jewett and Willys-Overland.

There is no question about the quality of AC Spark Plugs and other AC Products.

There is no question as to the sales possibilities.

Practically every motorist wants AC Products, because through their extensive use as original equipment, owners know AC quality and are satisfied users.

That's why it is good policy for dealers to establish their business on a line that gives them not only a profit, but a guaranty for the future.

AC Spark Plug Company, FLINT, *Michigan*

AC-SPHINX
Birmingham
ENGLAND

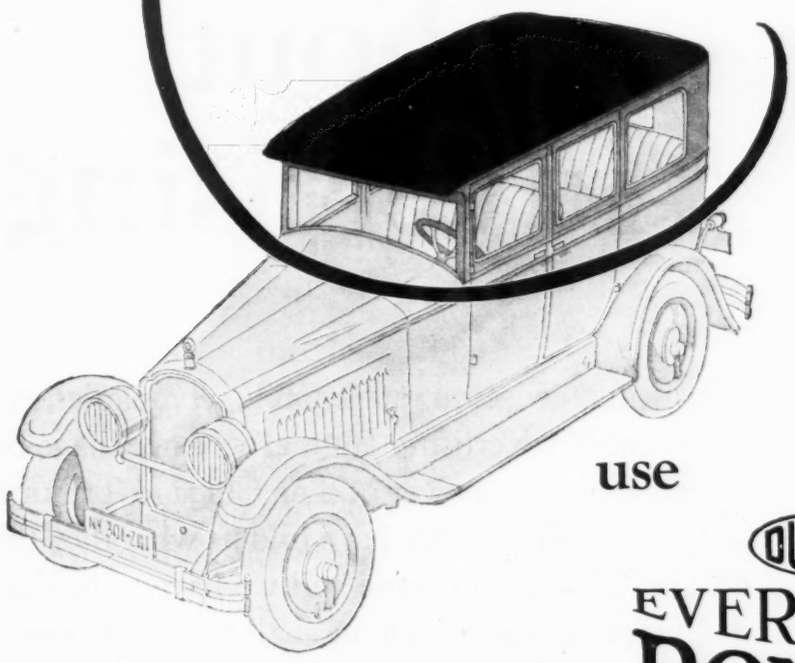
Makers of AC Spark Plugs—AC Speedometers—AC Air Cleaners—AC Oil Filters—AC Gasoline Strainers

AC-TITAN
Levallois-Perret
FRANCE

Over 200 of the world's most successful manufacturers use one or more, or all of these AC Products

AC SPARK PLUGS AC SPEEDOMETERS AC AIR CLEANERS AC OIL FILTERS

Where the weather strikes hardest



use

DU PONT
EVERBRIGHT
PONTOP

for long-lived lustre!

CLOSED car decks may now be smart and lustrous through months and months of wear.

Du Pont Everbright Pontop (made of rubber and thus permanently water-proof) has a finish that laughs at sun and rain. It gives lasting protection. And what is more, it is always soft and flexible, permitting speedy tailoring. It will not crack in even the coldest weather.

Here is a deck material that makes it no longer necessary to ignore the car top. Tops of Everbright Pontop give an *extra* sales-advantage.

E. I. DU PONT DE NEMOURS & CO., Inc.
FAIRFIELD, CONN.

They know about Advertising

Presidents of seven automobile companies, who know about advertising from experience, have been impressed by the power of The Chicago Tribune to sell automobiles. They have told us what they think of The Chicago Tribune and we have published it in a large booklet which we shall be glad to send on request. Read what the following men have to say about The Tribune and its ability to sell cars:

A. R. ERSKINE, *president of The Studebaker Corp.*

C. N. NASH, *president of The Nash Motors Co.*

JOHN N. WILLYS, *president of The Willys-Overland Co.*

EDWARD S. JORDAN, *president of Jordan Motor Car Co., Inc.*

A. R. GLANCY, *president of The Oakland-Pontiac Co.*

E. L. CORD, *president of The Auburn Automobile Co.*

M. E. FORBES, *president of The Pierce-Arrow Motor Car Co.*

DUBOIS YOUNG, *president of Hupp Motor Car Corp.*

From the
PRESIDENTS
of
AUTOMOBILE MANUFACTURING COMPANIES

"Newspapers which reach extremely large numbers of people are not uncommon in America, but a newspaper like The Chicago Tribune, which reaches an extremely large number of people with above-the-average incomes is unique."

"One of your most zealous boosters is our Chicago dealer."

"We have come to regard The Tribune not only as a powerful medium in Cook County, but feel its influence throughout the middle western territory. The Tribune is purchased for its wide coverage in hundreds of cities."

"The interesting thing about The Chicago Tribune is that it is something beyond a quantity of circulation. It is a national force."

"The Tribune covers a very important market in a thorough and effective way for us."

"Since we began using large space in The Tribune, our sales have increased enormously."

"The Tribune has received far more money from our advertising appropriation than any other newspaper in the United States."

GREAT automobile manufacturers who have used The Chicago Tribune more extensively than any other Chicago newspaper have had remarkable and unusual success. Because of the concentration of their advertising, they are able to trace sales increase to their consistent use of Chicago Tribune space. Every automobile man will be interested by the following series of pages which are reprinted in the new book "They Know About Advertising":

"Why Studebaker uses pages in The Chicago Tribune."

"Which of these three factors does your product need:

1. High quality
2. Good value
3. Adequate advertising

to achieve success like that of Nash?"

"Willys-Overland increases its business in The Chicago Territory from $4,447,680 to $10,688,907 with pages in The Chicago Tribune."

"Counting the truly great on your fingers"—a Chicago Tribune advertisement written by Edward S. Jordan.

"Oakland-Pontiac sales increase from $2,347,453 to $4,830,464 in nine months."

"Auburn increased its business 275% and jumps from 38th to 18th place in automobile registrations —by concentrating its advertising in The Chicago Tribune."

"In 10 months by concentrating its advertising in The Chicago Tribune, Hupmobile increases its Chicago sales from $4,308,499 to $5,711,567."

"Pierce-Arrow sales in Chicago increase 152% and 80% of the new business is traced directly to Tribune advertising."

"Chrysler sales increase from $4,408,501 to $11,157,756 in one year with Chicago Tribune advertising."

The Chicago Tribune carries twice as much automobile lineage as its nearest competitor. In a single issue of The Sunday Tribune, it carries more automobile lineage than any other Chicago paper carries all week.

Chicago Tribune

THE WORLD'S GREATEST NEWSPAPER

WRITE for the NEW AUTOMOBILE BOOK

"THEY KNOW ABOUT ADVERTISING"

Did You Enjoy This Copy?

YOU can get one like it every week for only $3.00 a year—an average cost of a little less than six cents each.

Each and every man in the trade needs MOTOR AGE—needs the positive help it offers in the solution of daily problems and the valuable ideas it gathers for its readers.

Your competitor reads MOTOR AGE, and you need to read it also if you want to keep up with the leaders of the automotive field.

Here's How MOTOR AGE Will Help You

SERVICING—MOTOR AGE will show you how to make flat rates—How to sell Service—How to make customers permanent—How to organize a workshop—How to handle knotty problems—How to select Machinery—How to test electrical systems—How to make quick repairs—How to route shop work.

HIRING—How to get the right men—How to train them—How to pay them—How to get their co-operation—How to keep them enthusiastic.

BUYING—How to select an accessory stock—How to judge merchandise—How to get a fast turnover—How to avoid dead items.

SELLING—How other men do it—How to keep down overhead—How to advertise—How to make Salesmen produce—How to create a market—How to find prospects—How to make every sale pay—How to avoid losses—How to write letters that build business.

AND THEN - - - -

Whatever else you need to know to make your business run smoothly MOTOR AGE will tell you if you only ask—All personal inquiries receive personal attention from our editors. Every subscriber is encouraged to come to us with his problems, whether mechanical, legal, architectural or financial. Try us, and we will give you "Service you will like."

THE COUPON is here for your convenience. If you are already a subscriber, pass it on to some friend in the trade who is not. When he starts getting MOTOR AGE he'll appreciate the favor.

MOTOR AGE
5 South Wabash Avenue,
Chicago, Ill.

IMPORTANT — MOTOR AGE is published exclusively for the trade. Subscriptions are accepted only from those actively engaged in our field—so please don't forget to include your business card or letter head with this order.

Gentlemen: Enclosed find $3.00 to pay for a year's subscription to MOTOR AGE, including all special issues published during the life of my subscription.

Name .....

Street and Number .....

City ..... State .....

Firm Name .....

NOTE: **If you are already subscribing to MOTOR AGE, please hand this coupon to a dealer who is not. He'll become a better competitor from reading MOTOR AGE.**

DURANT MOTORS, Inc.

announces

NEW LOWER PRICES

on

Low-cost Transportation

Star *Cars*

Old Price	FOUR	*New Price*
$675	COUPE	$650
$695	COACH	$675
$795	SEDAN	$765

Old Price	SIX	*New Price*
$820	COUPE	$795
$880	COACH	$845
$910	SPORT ROADSTER	$885
$975	SEDAN	$925
$995	LANDAU	$975
$995	SPORT COUPE	$975
$975	COMPOUND FLEETRUCK TON CHASSIS	$950

Prices on other models as follows:

4-CYLINDER CHASSIS	$470
" " CONVERTIBLE ROADSTER	$550
" " TOURING	$550
6-CYLINDER CHASSIS	$650
" " TOURING	$725

Prices f. o. b. Lansing, Mich.

AGAIN IMPROVED

DURANT MOTORS, Inc., Gen'l Sales Dept., Elizabeth, N. J.

Plants: ELIZABETH, N.J. LANSING, MICH. OAKLAND, CAL. TORONTO, ONT.

TUTHILL TITANIC
ALLOY STEEL SPRINGS

Guaranteed to Fit—No Installation Grief

There is no bug-bear or white elephant or black-cat about a Tuthill Titanic Spring.

The fit is perfect. Each is made according to correct specifications and there is a Tuthill Spring for each motor car, present-day or obsolete.

Each Tuthill Titanic Spring likewise carries our unconditional guarantee against breakage at the hump center.

You are protected against refund, against dissatisfaction and against unnecessary trouble and overtime in the shop.

Order From Your Jobber

TUTHILL SPRING CO.

760 Polk St., Dept. 1792 **Chicago, Ill.**

Quality Spring Makers for Nearly Half a Century.

1/3 *of a billion dollars*

—is estimated to be the retail volume of accessory business that will be done in 1927 by automotive merchants.

Its distribution will be measured largely by dealers' intelligent buying.

Both the editorial and advertising pages of Motor Age will help you choose stock that sells. It will pay you to take advantage of this service.

MOTOR AGE
5 S. WABASH AVE.
CHICAGO, ILL.

Add a Lasting Thrill to any Motor

Half Thousandths ~Wear~ in 20,000 Miles

BOHNALITE

Bohn Products include Ring True Bearings—Bohnalite Castings, semi-permanent, permanent mold and sand, Nelson Bohnalite pistons; we also supply the government with replacement pistons and bearings for the Liberty engine.

THE LIGHT ALLOY PISTON WITH A STEEL BACKBONE

The Strut

Special Alloy steel struts are cast in, to control expansion and maintain satisfactory clearances under all engine operating conditions. The struts are the backbone of piston endurance and life.

Half ~ Thousandths WEAR IN 20,000 MILES

Hardly More Than Polished Bright

Inability to stand the "gaff" has long been the only drawback to light alloy pistons, but now that Nelson ★Bohnalite Pistons have hung up unprecedented endurance records, there is no longer any need to sacrifice performance for durability.

Combined in this light alloy piston are all the advantages that have ever been claimed for cast iron, aluminum or aluminum alloy pistons.

★Bohnalite, the light alloy from which this piston is made, should never be confused with any other aluminum alloy on the market. Every Nelson Bohnalite Piston is heat-treated for uniformity, strength and hardness.

Nelson Bohnalite Pistons are already being used by manufacturers of cars, for which they make claims of unprecedented performance—a list of them will be gladly furnished upon request, along with a booklet which further describes the design of this outstanding piston.

BOHN ALUMINUM & BRASS CORPORATION

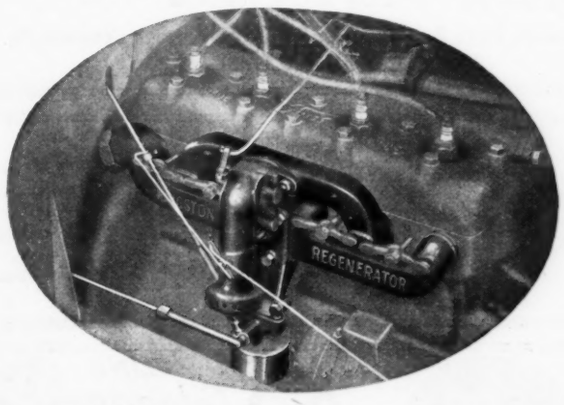
EAST GRAND BOULEVARD, DETROIT

RIGHT NOW

Here is the livest and most profitable single item in your stock — THE NEW KINGSTON MODEL B REGENERATOR. It hit the new year with a bang, and it has been going bigger every day. It brings to the Ford car and truck the successful application of the Dry Gas principle of carburetion. Double your sales this month with the NEW Kingston—tried, proved, perfected and RIGHT NOW in successful operation on thousands of fast-stepping cars.

Get behind this and watch sales climb! It's new — different — finer and better, and it gives a new sweep and zest to motoring.

The NEW and patented Kingston Regenerator consists of a combination exhaust and intake manifold as well as carburetor for use on Ford cars and trucks, replacing standard carburetor and manifold equipment without the use of additional parts. Designed and built by experts, it means new power, added pep and life, easy starting and snappy acceleration, with a factor of fuel economy that makes it pay for its cost in a very short time. Backed by our vigorous merchandising policy and intrenched in its own solid merit, it means the strongest selling item of your line.



Right Now! Something hot! Our big consumer advertising campaign is in full life. Tie into this good business.

Wire your Jobber TODAY!

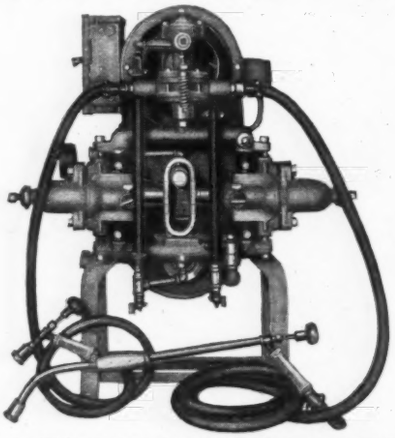
BYRNE, KINGSTON & COMPANY

KOKOMO, INDIANA

INCREASE PROFITS

DO BETTER WORK IN LESS TIME

With a Power Car Washer



A POWER CAR WASHER MEANS

Increased business and profit.
Better work and quicker service to customer.
Inaccessible chassis parts thoroughly cleaned.
Greater saving in water, soap, sponges and chamois.
Cars washed quicker and cleaner.
Easier work—consequently, satisfied labor.
Rapid return on investment.
Building business for other departments.

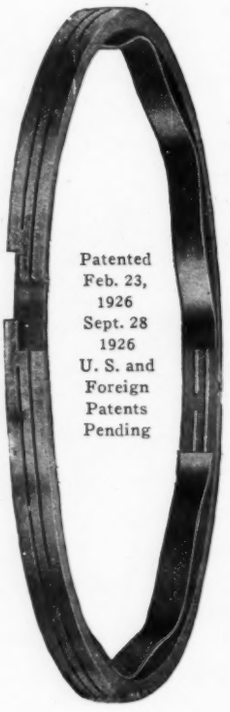
"Friend" Car Washers are built of the very best materials by skilled workmen and are backed by 30 years of experience in high pressure pump building.

Made in one, two and four gun sizes. Completely equipped. Special angle guns—long or short models.

Write for Bulletin and prices

"Friend" Manufacturing Co.
Gasport, N. Y.

More Profit on this one Item than on all your other Business put together



THE one ring that can be depended upon to stop oil pumping, piston slap and compression loss is a national leader in demand.

Aggressive Dealers and Service Stations enjoy better profits from Simplex Piston Rings than from all other efforts combined.

Simplex Service plus Simplex Rings enable you to

Guarantee results for 10,000 miles.

Five hundred distributors carry stock and give instructions for reconditioning **any** motor without resizing cylinders or installing new pistons. Guarantee backed by distributor in your community.

Get the whole Simplex Proposition—yours on request.

SIMPLEX
Piston Rings

THE SIMPLEX PISTON RING CO.
Of America, Inc.

1971 East 66th Street, Cleveland, Ohio

In the next issue of

MOTOR AGE

there may be a new idea that will mean many dollars of profit to you - -

Don't miss it!

FOLLETT'S NEW MODEL TIME STAMP

accounts for every labor minute

Learn the interesting details from our descriptive data.

Prints the year, month, day, hour, minute, A.M. or P.M. at the exact moment the plunger is pressed—like this, for example:

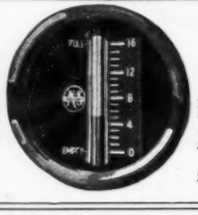
NOV 19 1920 4 31 PM

Tells when a job is started—and when it is finished. There can be no dispute over the time charge.

Absolutely automatic — except for winding. Every machine guaranteed.

Follett Time Recording Co., 217 High Street, Newark, N. J.
"Established Since 1904"

Let us send our profit-boosting plan. It's Free.



GASOLINE K-S Telegage

And now, a Telegage for the Ford. See our half page advertisement in this week's issue Saturday Evening Post. Write for description and proposition to the trade.

KING-SEELEY CORPORATION
298 Second Street Ann Arbor, Michigan
Chicago Branch, 2450 Michigan Boulevard

NEW NEW NEW

Did you see proof of our claims at the New York Show?

"NO TARNISH"

A Metal Preservative Not a Polish

At last a preservative for nickeled radiators, lamps, bumpers, door handles, top bows, etc., that banishes rain spots, tarnish, dirt, oil, etc., forever.

One application of NO TARNISH keeps all metal surfaces clean and bright for six months to a year. After applying simply wash surface with water and dry with chamois skin. Will not crack, chip or peel even when metal is bent or broken.

NO TARNISH is applied in a few minutes, dries quickly and the clean, bright finish is preserved. Remember NO TARNISH is a preservative of nickel, gold, silver, copper, brass, etc., and is positively guaranteed to contain no acids or grit which will in any way injure highly polished surfaces.

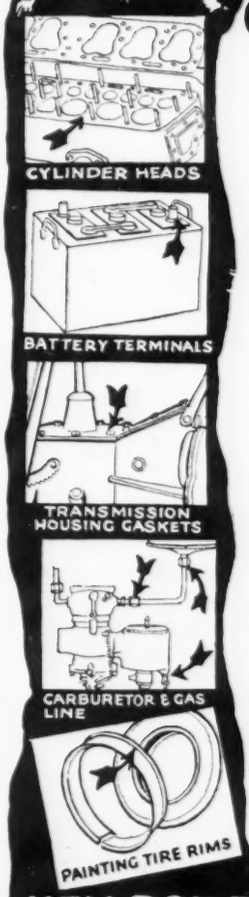
Use NO TARNISH on cars in your sales room. Eliminate the drudgery of keeping nickel clean and bright.

There are hundreds of opportunities for you to sell NO TARNISH right now. Winter's Snow, Rain, Sleet and Mud are the natural enemies of radiators and bumpers. Car owners jump at the chance to buy NO TARNISH. It is a winter necessity.

No Tarnish Products Corp.

50 Lispenard St., New York, N. Y.

All inside one little can!



KEY Graphite Paste

There's a Sample Waiting for You

Key Graphite Paste has met with such enthusiastic approval from garage men, battery men, dealers and jobbers over the country that we want **you** to try it.

Tear off the coupon, enclose it with ten cents in stamps, and send it in today. By return mail we will forward a generous sized can of Key Graphite Paste.

It can be used for sealing every gasket on the auto, also on the battery terminal posts to prevent sulphation. Descriptive leaflet will tell you just where and how to use it. Mr. Kramer in Somerset, Colo., says he'd "be lost without it—it's of such universal use in the shop."

15—Major Uses—15

Key Boiler Equipment Company

East St. Louis, Illinois

KEY BOILER EQUIPMENT CO.

27th and McCasland Ave. East St. Louis, Ill.

I am enclosing ten cents in stamps. Please send me sample can of Key Graphite Paste and free descriptive leaflet on where and how to use it.

Name .....

Firm .....

Address .....

.....

MA-127

ROSE *Has led its field for eleven years!*

Easy Valve Action

TIRE PUMP

Kawneer

SOLID COPPER

STORE FRONTS

Write for Special Book—Garage Front

THE KAWNEER CO., 3724 Front St., Niles, Mich.

WIRE OR WRITE US FOR NEW OR USED

TIRES — PARTS — ACCESSORIES

IF IT'S FOR AN AUTOMOBILE WE HAVE IT!

SEE OUR NEXT DISPLAY IN MOTOR AGE, FEBRUARY 3

STATE AUTO PARTS CORPORATION

2011-13-15 S. State St., Chicago, Ill.

The Burgan Cotter Pin Extractor

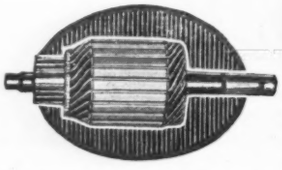
Works Like Magic

It goes in anywhere, grips the cotter pin—snaps it out in a jiffy—holds it until released. You don't have to pull or twist. Just squeeze the handles. It's a great tool!

Write for prices and details

THE BURGAN CORPORATION

9 So. Clinton St. Chicago, Ill.



FREDERICKS Rewinding Service

New Rewind Profits—See announcement every 4th week. Write now for price list. The H. M. Fredericks Co., Lock Hoven, Pa.

UNITED STATES Portable Electric DRILLS

Built by the oldest makers of Portable Electric Drills in the World.

Ask for Catalog 105

THE UNITED STATES ELECTRICAL TOOL CO

Cincinnati, Ohio, U. S. A.

B U R D

TURNED — QUICK SEATING — OIL PISTON RINGS

BURD HIGH COMPRESSION RING CO., ROCKFORD, ILL.

WESCO TIRE CHAINS

"They Stand the Gaff"

Stops Pump Shaft Leaks and Saves the Winter Solution

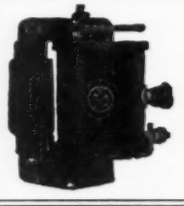
Conneaut Plastic Metallic Packing molds in the fingers to fit stuffing-boxes of any size or shape. It is a repair for the worn shaft and loose bushing. At your jobbers; if not write us.

1 lb. can.....$1.75 per pound

5 lb. can.....$1.60 per pound

THE CONNEAUT PACKING CO.

Conneaut, Ohio



Mallory Ignition Coil

Has two primary windings instead of one. Gives a hotter spark, makes easier starting, gives more power, quicker pickup and more mileage. Try it on a sluggish motor. Write for full particulars.

The Mallory Electric Corporation

Toledo, Ohio

FISK TIRES

There's a Fisk Tire of extra value in every size, for car, truck or speed wagon

WATERVLIET SPIRAL EXPANSION ALIGNING REAMERS

Will Not Chatter

New check nut positively insures against over-expansion.

Ask your jobber or write for literature

Watervliet Tool Co., Inc.

1037 Broadway, Albany, N. Y.

New York: 1780 Broadway; Kansas City: 711 Mutual Bldg.; San Francisco: 661 Turk St.

SCHEBLER

REG. U. S. PAT. OFF.

The World's Finest **CARBURETORS**

The Wheeler-Schebler Carburetor Co. Indianapolis, U. S. A.

NEXT WEEK

—is the time to read next week's issue of MOTOR AGE, as you are reading this week's issue this week

MOTOR AGE

5 So. Wabash Ave. Chicago, Ill.

U.S. AIR COMPRESSORS

U.S. AIR COMPRESSORS

The most practical, economical and efficient air compressor for garage, filling station and tire shop needs.

U.S. AIR COMPRESSORS

The UNITED STATES AIR COMPRESSOR CO.

5304 Harvard Ave. Cleveland, O.

TASCO

Gas Gauge for FORD CHEVROLET OVERLAND and STAR

Sells Quick at $1.25 Retail. Types "K" and "J" for 1926 Chevrolets and all Stars Sell at $1.50

THE AKRON-SELLE CO.

Akron, Ohio

RADIATOR CAPS ORNAMENTS

Faith

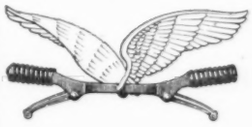
Confidence in a product that has been produced with scrupulous attention to detail is born only of experience. Our clients know they receive only the finest in material and artistry.

FAITH MFG. CO., Inc. 2533-39 N. Ashland Ave., Chicago, Ill.

The Jordan is different
—and always will be.

JORDAN

Jordan Motor Car Company, Inc.
Cleveland, Ohio



Red Wing Suspension For Fords

Improves the riding and handling qualities of Fords, and permits greater speed with safety. Absolutely unbreakable. 30-minute installation. Money-back guarantee. Liberal profits. Write.

RED WING COMPANY
612 N. Michigan Ave. Chicago

free write for your copy

The Book "AIR PROFITS" Shows how to get more work out of an air compressor. How to use compressed air for many pay jobs.

BRUNNER MFG. CO.
UTICA NEW YORK

BRUNNER AIR COMPRESSORS

GATES VULCO

Fan Belts and Radiator Hose

Made By
The World's Largest Makers of Fan Belts

When temperature is below 60° Fahrenheit every motor that runs needs the protection of

PINES AUTOMATIC WINTERFRONT

For complete selling information write your nearest distributor or direct to

PINES WINTERFRONT CO., 422 N. Sacramento Blvd., Chicago

CORK SEALED PISTON RINGS

Here Is Something to Sell!

A piston ring, on the principle of a packing ring, that gives remarkable results in service, is used in thousands by automobile factory branches for replacement—and pays a profit worth while. WRITE FOR DETAILS.

THE CORK-SEALED PISTON RING CORP.
2332 Michigan Avenue, Chicago
Factory: Denver, Colo.
Canadian Distributors: Purser, Bull & Co., Ltd. Toronto, Canada

SIOUX

Valve Face Grinding Machine

Get a demonstration of Sioux before you buy any valve grinding machine. GUARANTEED FOR A LIFETIME.

Your Jobber Sells It

ALBERTSON & CO.
Sioux City, Ia.

A COMPLETE STOCK of AUTO PARTS and ACCESSORIES

5-Day Money Back Guarantee
Repossessed Used Cars
Write for Low Prices
UNITED AUTO WRECKERS
2429 S. State St. Established 1916 Chicago

GENERAL MOTORS BUILDING

Broadway to 8th Ave. ~NEW YORK~ 57th to 58th Street

Renting & Managing Agent CUSHMAN & WAKEFIELD, INC. 50 East 42d Street New York City

WEIDENHOFF

Shop Equipment
for Battery and Electrical Service
4358 Roosevelt Road, Chicago, Ill.

TIMKEN

Tapered

ROLLER BEARINGS

The Cooper CUT-OUT ENGINE TESTER AND CARBON OUTLET VALVE

Dependable. Certain. Easily installed. A big seller all the year round.

HALL HONE $35 at your Jobber's

—the Fastest Cutting Hone Made!

CLASSIFIED ADVERTISING

PATENTS & PAT. ATTORNEYS

C. L. PARKER
Ex-Examiner U. S. Patent Office
Attorney-at-Law and Solicitor of Patents
McGill Building, Washington, D. C.
Patent, Trade Mark and Copyright Law

MOTOR WANTED

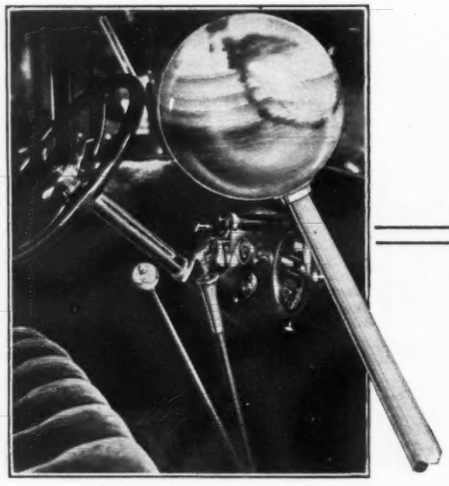
Wanted to buy—1926 or 1927 used Master Six Buick motor. L. H. Thomas, 708 Garfield Ave., Baxter Springs, Kansas.

To locate business opportunities
To sell, rent, exchange or buy
To find men or employment

THE CLASSIFIED DEPARTMENT WILL HELP YOU

CLASSIFIED ADVERTISING RATES

Ten cents a word is the rate for all undisplayed advertisements set solid, regular want ad style; minimum charge $1 an insertion. All capitals, 12c a word; all capitals, leaded, 15c a word. Payable in adavnce.



Women Drivers Want Real Onyx

The wealth of color in Genuine Yavapai Onyx Gear Shift Balls makes them a steady seller to the best class of trade.

They are made of the finest onyx in the world, from the famous mines in Arizona.

1927 will be the banner year for YAVAPAI Onyx Balls.

See your jobber today about a stock or write us direct giving his name.

Yavapai Onyx Mining Corp.

Automotive Division

Dyersville Iowa

U. S. A.

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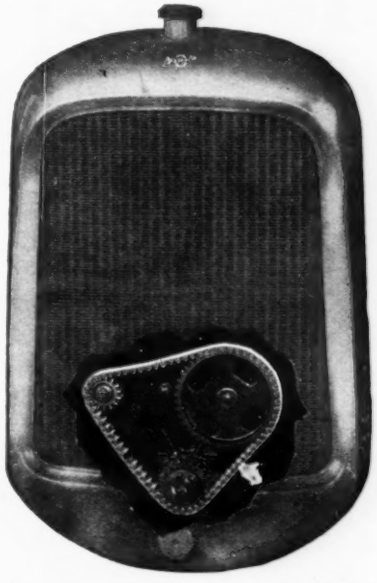
UNSEEN BUT VITAL

To the majority of car owners the TIMING CHAIN is one of the hidden parts of the motor mentioned by the car salesman and then forgotten until it must be replaced.



Few drivers realize that every mile traveled, every revolution of the wheels, in fact, is controlled by the TIMING CHAIN, which is constantly "on the job" while the motor is running, and that this UNSEEN BUT VITAL part is subject to normal wear. Some makes of chain wear faster than others and in a comparatively short time cause motor trouble by jumping the sprocket teeth.

When it is necessary to replace a TIMING CHAIN for one of your customers don't give him merely a new TIMING CHAIN but be sure and give him a "WHITNEY," which has long life and never been known to jump the sprocket teeth. It will save him money and he will be so well pleased with the results that he is sure to come to you for his next repair job.

"WHITNEY"

SILENT HIGH MILEAGE CHAINS

Ask our distributor in any city, or mail coupon for specification list.

The Whitney Mfg. Co.
Hartford, Conn.

I want that book on chain specifications

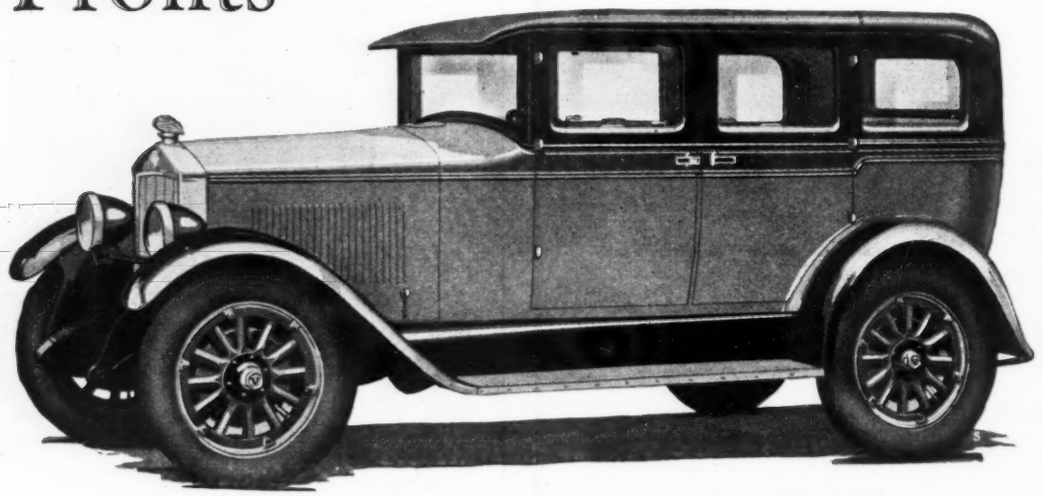
Name.....

Address.....

☐ Service Station ☐ Fleet Owner ☐ Parts Jobber

LONG VELIE LIFE

Value! Beyond All Competition—Real Profits



Showing the "Show"

At the New York show the Velie Line, with this Sedan at $1045, stood out sharply as *the greatest value in it's price class.*

Comment was freely made that a car of such beauty, performance and economy would be expected to sell for $300 more *at least!*

What an advantage to holders of the Velie franchise! How competition dwindles in the face of such features as those listed at the right!

Completing the Velie line, this remarkable Sedan makes the Velie proposition one of unmatched possibilities. And the Velie franchise is *different*—a business of your *own.*

Velie builds two lines—standard six Sedans and Coupes, 112-inch wheelbase, $1045 up—special six Sedans and Coupes, 118-inch wheelbase, $1450 up.

PROFIT FEATURES

Found in No Other 6 Cylinder 4 Door Standard Sedan, 56 Inch Tread At Its Price

1. The most powerful car at its price.
2. Only valve-in-head motor in any car priced under $1200.
3. Only motor with forced pressure lubrication to the valve mechanism.
4. The strongest construction.
5. Only motor with Lanchester type vibration dampener.
6. Only radiator capacity of 4¾ gallons.
7. Only four-wheel hydraulic brakes.
8. Only car with heat indicator on the dash.
9. Only car with 182¾ inches of spring equipment.
10. Lowest cost—price and weight considered.

If the Velie franchise is open in your community—investigate

VELIE MOTORS CORPORATION

MOLINE, ILLINOIS

Truck and Bus Operators use more American *Hammered* Piston Rings than any other make

More uniform metal + longer wear
On account of giving better service

MORE TRUE

Not affected by heat
stand more heat &

Longer life

IN a recent survey among operators a decided preference was shown for American Hammered Piston Rings.

This survey was not made by us and our name was not mentioned.

The operators themselves mentioned 23 different makes of piston rings and American Hammered Rings were specified by more operators than specified any other make of ring.

We are reproducing a few of the reasons exactly as given us—

Keep tension longer

Can depend on accuracy of over/sizes

I HAVE FOUND NONE BETTER

Strong TENSION until WORN out

Most Miles on Gas-Oil-Rings-Cyl. Walls

American Hammered Piston Ring Co. *Baltimore, Md.*

World's Largest Manufacturer of HAMMERED Piston Rings

This Is A Service Year

Your BIGGEST Year

The Automotive Dealer Who is Last Year and Who Places than Volume Has

By JOHN A.

WHAT are your prospects, as an automotive dealer, for 1927?

There is one correct answer to that question—and only one.

That answer is—

It depends on you.

If you are a very good merchant, you will make more money in 1927 than you made in 1926.

If you are only a reasonably good merchant, you will have to exert yourself to do as well this year as last.

If your merchandising effort during the year must be classified as indifferent, careless, negligent, lackadaisical—or no effort at all—you will lose money, and perhaps pass out of the picture entirely.

"Oho," I hear you exclaim, "here's a prophet who believes in playing 'em safe. He deals in ego-hoch talkabout. He makes a prediction that anybody could do about any business at the beginning of any year."

Well, my wise-crackling, short-memoried friend, you can surely remember back to the time when that would not have been born out in the main-

Not ago, for instance, when good business as a whole meant, almost automatically, an increase in the industry's sales over the same month, you could, at the same time, increase your own sales. And vice versa. If you wanted a fairly accurate fore- you merely needed to get a possible on the general

the market, re- Good mer- profits or

MORE intelligent, more energetic, merchandising, born of a deliberately cold-blooded competition for the buyer's dollar—which has brought about a revolutionary change in the automotive business during the last several years—will prove the most vital factor in your success in 1927.

and your business, rather than with the outlook in the industry generally.

After all, in the final analysis, your interest in the prognostication of the year's outlook centers primarily around your own business.

Here is the way for you to look at your chances for 1927.

You are engaged in the business of supplying the public with a universal need and desire. As a utility, the automobile comes next to food and lodging. In addition to its sphere of usefulness, there is inextricably bound up in it the elements of pleasure and pride of ownership. These factors have a value to the purchaser that is beyond calculation.

If your imagination will not permit you to think of the future of the business without thinking of the saturation point hopeless, it will do your soul good to give a thought to that wise automobile salesman in New York who figured it out, in 1910, that everyone who might buy an automobile had already bought one at that time. He left the automobile industry flat. (See Barnum and Bailey's Circus.)

Finally, the two truths on

Will 1927 Be It?

a Better Merchant than he was
More Importance on Profit
Nothing to Fear

CLEARY

YOU are engaged in the business of supplying the public with a universal need and desire. As a utility, the automobile comes next to food and lodging. In addition to its sphere of usefulness there is inextricably bound up in it the elements of pleasure and pride of ownership. These factors have a value to the purchaser that is beyond calculation.

which the permanent prosperity and growth of the automotive industry are fundamentally based—

Everyone wants an automobile.

Everyone owning an automobile wants something for a lesser. He needs maintenance. He wants a new car.

The gloomy prophets who have been predicting the collapse of the automobile business every year for the last twenty years, are active again now. They have learned to lessen from the circumstance that, despite their pernicious prophecies, the industry has, with almost unfailing regularity, broken production and sales records each year.

They predict that it will be impossible to keep up the swift pace set by 1926.

Suppose that pace is not maintained—as regards the number of passenger car units sold.

Would that mean the collapse of the industry?

On the contrary.

As a matter of fact, if every element in the industry, from the largest manufacturer down to the smallest garage or repair shop, were put on a business basis, there could be a substantial decrease in the number of passenger cars sold and

try would show a greater profit in the present twelve-month than in the year just ended.

It is no secret in the business that volume of sales does not always spell a corresponding volume of profits.

As to whether there will be a decrease in passenger car sales this year, as compared with 1926, one man's guess is as good as another's, after proper consideration is given to the curves of progress over a reasonable period, the laws of expectancy and the other factors beloved of the expert statistician.

Let us assume merely for comparison that sales of passenger cars will be 20 per cent less for the industry as a whole.

What does that mean in relation to your business?

It may mean nothing at all. While the whole country was showing a loss of 20 per cent your particular territory might either net a substantial gain, or it might remain unchanged, or it might show a loss greater or less than the nation's 20 per cent decrease.

But let us assume, further, that the commodity which you hold the franchise maintains the average for the country. In other words, suppose the sales of passenger cars in your territory are 20 per cent less than last year.

You should not take this to mean that you necessarily show that same decrease at all, for that matter. There would be a reduction of one-fifth in cars sold by all the dealers in your territory to inspire you to greater and more effort to sell a larger proportion of the total sold last year.

And then, you have other sales to fall back on than new cars. There are accessories and parts to counteract any loss in car sales.

When—

It Will Profit You To Add The Stamp Of Quality Goods To Your Servicing Reputation

Success in business is never a co-incidence.

It is the reward for service rendered. One of the largest industries in the United States, as well as one of first rank in importance, is that of servicing automotive vehicles. There is a profit to be made from the millions of cars on the road today which will require some rewiring service before the year is over. Many of these cars are in the possession of your customers.

Proper attention to rewiring service will go a long way towards making this your biggest as well as your best year. A Packard Cable Department will enable you to take care of rewiring jobs with the least inconvenience—with the greatest profit and the utmost satisfaction. Ask your jobber salesman friend who handles the Packard Line for complete information, or write us direct.

The Packard Electric Company-Warren, Ohio

Packard
TRADE MARK
is never seen, except on goods of honest value